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Ontario

ENVIRONMENTAL ASSESSMENT BOARD

VOLUME: 393

DATE: Thursday, August 6, 1992

BEFORE:

A. KOVEN Chairman

E. MARTEL Member

FOR HEARING UPDATES CALL (COLLECT CALLS ACCEPTED) (416)963-1249

EARR
ASSOCIATES &
REPORTING INC.

(416) 482-3277

2300 Yonge St., Suite 709, Toronto, Canada M4P 1E4



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HEARING ON THE PROPOSAL BY THE MINISTRY OF NATURAL
RESOURCES FOR A CLASS ENVIRONMENTAL ASSESSMENT FOR
TIMBER MANAGEMENT ON CROWN LANDS IN ONTARIO

IN THE MATTER of the Environmental
Assessment Act, R.S.O. 1980, c.140;

- and -

IN THE MATTER of the Class Environmental
Assessment for Timber Management on Crown
Lands in Ontario;

- and -

IN THE MATTER of a Notice by The Honourable
Jim Bradley, Minister of the Environment,
requiring the Environmental Assessment
Board to hold a hearing with respect to a
Class Environmental Assessment (No.
NR-AA-30) of an undertaking by the Ministry
of Natural Resources for the activity of
Timber Management on Crown Lands in
Ontario.

Hearing held at the Civic Square, Council
Chambers, Sudbury, Ontario on Thursday,
August 6, 1992, commencing at 8:30 a.m.

VOLUME 393


BEFORE:

MRS. ANNE KOVEN
MR. ELIE MARTEL

Chairman
Member

A P P E A R A N C E S

MR. V. FREIDIN, Q.C.	)	MINISTRY OF NATURAL
MS. C. BLASTORAH	)	RESOURCES
MS. K. MURPHY)	
MR. B. CAMPBELL)	
MS. J. SEABORN	)	MINISTRY OF ENVIRONMENT
MS. N. GILLESPIE)	
MR. R. TUER, Q.C.	)	ONTARIO FOREST INDUSTRY
MR. R. COSMAN	)	ASSOCIATION and ONTARIO
MS. E. CRONK	)	LUMBER MANUFACTURERS'
MR. P.R. CASSIDY	)	ASSOCIATION
MR. D. HUNT)	
MR. R. BERAM		ENVIRONMENTAL ASSESSMENT BOARD
MR. J.E. HANNA	)	ONTARIO FEDERATION
DR. T. QUINNEY	)	OF ANGLERS & HUNTERS
MR. D. O'LEARY		
MR. D. HUNTER	)	NISHNAWBE-ASKI NATION
MR. M. BAEDER	)	and WINDIGO TRIBAL COUNCIL
MS. M. SWENARCHUK	)	FORESTS FOR TOMORROW
MR. R. LINDGREN)	
MR. D. COLBORNE	)	GRAND COUNCIL TREATY #3
MR. G. KAKEWAY)	
MR. J. IRWIN		ONTARIO METIS & ABORIGINAL ASSOCIATION
MS. M. HALL		KIMBERLY-CLARK OF CANADA LIMITED and SPRUCE FALLS POWER & PAPER COMPANY



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MR. R. BARNES)	ASSOCIATION
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MR. M. COATES		ONTARIO FORESTRY ASSOCIATION
MR. P. ODORIZZI		BEARDMORE-LAKE NIPIGON WATCHDOG SOCIETY

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MR. M.O. EDWARDS	FORT FRANCES CHAMBER OF COMMERCE
MR. P.D. McCUTCHEON	GEORGE NIXON
MR. C. BRUNETTA	NORTHWESTERN ONTARIO TOURISM ASSOCIATION

I N D E X O F P R O C E E D I N G S

<u>Witness:</u>	<u>Page No.</u>
<u>LAURIE A. GRVELINES,</u> <u>FRANK KENNEDY,</u> <u>RICH GREENWOOD,</u> <u>KEN ARMSON,</u> <u>DAVE GORDON,</u> <u>KEN ABRAHAM,</u> <u>AL BISSCHOP; Resumed</u>	67611
Cross-Examination by Mr. Lindgren	67611
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Re-direct Examination by Mr. Freidin	67768

I N D E X O F E X H I B I T S

<u>Exhibit No.</u>	<u>Description</u>	<u>Page No.</u>
2307	Article entitled Timber Management, A Quantitative Approach by Jerome Clutter et al.	67677
2308	A four-page excerpt from the FMA five-year review for the period 1984 to 1989 re the FMA review dealing with the Trout Lake Forest.	67710

1 ---Upon commencing at 8:30 a.m.

2 MADAM CHAIR: Good morning, Mr. Lindgren.

3 Would you like to get started.

4 MR. LINDGREN: Thank you, Madam Chair.

5 LAURIE A. GRVELINES,
6 FRANK KENNEDY,
7 RICH GREENWOOD,
8 KEN ARMSON,
9 DAVE GORDON,
10 KEN ABRAHAM,
11 AL BISSCHOP; Resumed.

12 CROSS-EXAMINATION BY MR. LINDGREN:

13 Q. Mr. Bisschop, perhaps we could start
14 with you. I am going to defer many of my questions on
15 alternatives until we hear from you in Panel 4, but I
16 do have a few questions arising out of your testimony
17 on road planning.

18 First of all, could you confirm for me
19 that under the MNR's proposed road planning procedure
20 there will be no consideration of need for a primary
21 road corridor?

22 MR. BISSCHOP: A. I would say that that
23 interpretation is incorrect. We have provided through
24 conditions 25(a) for primary roads, the requirement to
25 document the reasons that the road is required. So in
that sense I would suggest that the subject of need has
been covered.

1 Q. Well, Mr. Bisschop, we heard from you
2 repeatedly the other day that the null alternative
3 cannot and will not be considered at the local or unit
4 level because a lot of these decisions have been
5 preordained at the District Land Use Guideline level.

6 So in that context, I suggest to you, Mr.
7 Bisschop, that in fact under your proposal there will
8 be no consideration of the null alternative, no
9 consideration of the no-go option and in that sense
10 there is no consideration of the need for the road?

11 A. Again, I just simply reiterate again,
12 I don't see the same connection between null
13 alternative and discussion of need that you are
14 speaking to.

15 We will be dealing with this again in
16 Panel 4 in terms of how we see the subject of need in
17 environmental assessment equating to or being
18 considered under the environmental assessment subject
19 of purpose of the undertaking.

20 We contend that that matter is dealt with
21 in the environmental assessment itself which is the
22 subject matter that is discussed before the Board.
23 Upon the decision of the Board we contend that the
24 subject of purpose of the undertaking and consequently
25 need has been addressed.

1 We have added the requirement which we
2 suggest is an alternative approach to addressing the
3 subject of need to document the reasons that each and
4 every primary road is required in a timber management
5 plan as a requirement of plan documentation.

6 Q. Well, I don't want to steal your
7 thunder from Panel 4, Mr. Bisschop, but I recall
8 reading words to the effect that if this Board approves
9 this undertaking, then it automatically follows that
10 there should not have to be a consideration of need for
11 access, harvest, renewal or maintenance at the local
12 level. Isn't that the case?

13 A. That's correct and I think your
14 comment is consistent with what we have written and
15 with what we have said.

16 Q. Well, in that context, Mr. Bisschop,
17 I think I am going to put the same proposition to you I
18 did a few moments ago. If that is the position of the
19 MNR then there is no true consideration of need for
20 primary roads at the unit level if this undertaking is
21 approved by the Board?

22 A. I can simply refer you back to my
23 previous answer about how we deal with the subject of
24 need and the context of purpose of the undertaking and
25 our attempt to address -- to legitimately try to

1 address the concern that you have raised about need as
2 being the inclusion as a result of the negotiation
3 discussions as a requirement in conditions 25(a) to
4 document, the reasons that the primary road is
5 required.

6 In anticipation of moving on to the
7 subject of secondary roads, condition 39(a) deals with
8 exactly the same subject matter for each and every
9 secondary road.

10 Q. Well, I can assure you, Mr. Bisschop,
11 we will return to this subject in Panel 4, but in the
12 context of road planning, can you confirm for me that
13 there is no consideration of the null alternative that
14 is required under your proposal?

15 A. That is correct.

16 Q. I think I heard you say that under
17 your proposal there will be no consideration of
18 socio-economic impacts for primary and secondary road
19 corridors?

20 A. I don't think I would say there is no
21 consideration of social economic impact.

22 I would suggest that that subject of
23 impacts, whether they are impacts on the natural
24 environment, whether they are cost impacts, whether
25 they are impacts on the socio-economic environment are

1 covered in the analysis requirements for each road.

2 What we have said is we don't believe
3 there is a routine requirement for some kind of
4 formalized cost/benefit or socio-economic analysis
5 technique to be used for each and every road.

6 Q. Well, that's my point, Mr. Bisschop.
7 In your set of overheads on page 6 we see a bullet
8 point to the effect that in your proposal there will be
9 no need for routine or detailed cost/benefit or
10 socio-economic analysis.

11 I take it that's the proposal you are
12 putting forward to the Board?

13 A. I guess just to further add
14 definition to what that comment means, it means no
15 routine need to apply some kind of rigor cost/benefit
16 analysis technique.

17 Rather, we would approach the subject in
18 terms of addressing social economic effects in our
19 discussion of the advantages and disadvantages of each
20 and every road corridor alternative and we will discuss
21 the subject of cost in a different way in terms of the
22 estimate of the costs of each alternative and those
23 factors would be taken into consideration in the
24 comparison of alternatives and the ultimate selection.

25 Q. So I guess in the absence of a formal

1 socio-economic analysis approach the MNR is simply
2 going to be content to not go out and collect and
3 analyse impacts related to the social environment and
4 the economic environment.

5 You will just simply sit back and think
6 about what the impacts are as opposed to actually
7 collecting data on what they actually are?

8 A. I think we have explained repeatedly
9 in our earlier evidence, Mr. Lindgren, and I guess I
10 will point primarily to Mr. Clark's evidence during
11 Panels 9 through 13 that we would collect the necessary
12 information to address the problem and we believe that
13 that kind of thing should be addressed on a
14 case-by-case situation and the information requirements
15 and the level of analysis or analysis techniques that
16 need to be used would be addressed case by case.

17 Q. Finally, Mr. Bisschop, can you
18 confirm for me that consideration of need,
19 consideration of the null alternative, consideration of
20 socio-economic impact, those are all things that are
21 required in any EA pursuant to Section 5(3) of the
22 Environmental Assessment Act?

23 A. I agree entirely and we, MNR's
24 position is that we address those matters in the
25 environmental assessment itself which is the

1 environmental assessment which is before this Board to
2 make a decision on it.

3 Requiring the same reconsideration of all
4 those matters each and every time in each and every
5 plan in the rigor, if you will, of Section 5(3) of the
6 act requirements we contend is not required at the next
7 level of planning.

8 Q. So if your road planning analysis
9 does not require a comprehensive look at socio-economic
10 impacts, if it doesn't require a consideration of the
11 null alternative, to that extent would you agree that
12 the road planning procedure does not meet the content
13 requirements of Section 5(3) of the act?

14 A. I disagree. The planning
15 requirements for roads will require as a requirement of
16 addressing the advantages and disadvantages of the
17 alternatives and the information necessary to make a
18 decision will address comprehensively, as
19 comprehensively as is required for each and every
20 decision, the subject of social economic effects.

21 Again, and we will hear it in Panel 4, we
22 will articulate our position on why we do not see
23 consideration of the null alternative which, by the
24 way, is not a requirement in Section 5(3) of the act.
25 It is not required that the null be addressed.

1 It is a direction through the guidance
2 provided by the Ministry of the Environment. We
3 contend that that is not required at the management
4 planning level of this environmental assessment.

5 Q. Mr. Grvelines, on the issue of social
6 economic impact, I take that you read the evidence of
7 Mr. Clark during the MNR's case in-chief?

8 MR. GRVELINES: A. Some of it. Not all
9 of it.

10 Q. Did you read Mr. Clark's evidence
11 during Panel 10 of the MNR's case in-chief?

12 A. I can't swear to it.

13 Q. Well, I can tell you that during
14 FFT's cross-examination of Mr. Clark in that panel the
15 first question to him was, have you done any special or
16 emperical studies that document the socio-economic
17 impacts of timber management within the area of the
18 undertaking and the short answer was no.

19 So, Mr. Grvelines, in that context I am
20 asking you to confirm that you didn't come here with
21 any hard or concrete or emperical evidence related to
22 socio-economic impacts of timber management, that you
23 are here to update the Board on the forestry
24 initiative?

25 A. Basically I am here to update the

1 Board on the sustainable forestry initiative which we
2 hope eventually will be able to support the sorts of
3 detail benefit/cost analysis which you are speaking
4 about, but, again, there is a fair amount of
5 development in the works.

6 Q. So I take it you would agree with me
7 that you have not provided the Board with any hard data
8 on the actual socio-economic impacts of timber
9 management in the area of the undertaking?

10 A. No. Now you are speaking at a
11 provincial level? Well, I guess I haven't yet. Not
12 yet.

13 Q. You haven't done it at the
14 provincial, regional or unit level, have you?

15 A. That work is underway right now.

16 Q. What's the staff budget for that
17 particular program, sir?

18 A. Is this the forest values you are
19 speaking of?

20 Q. Yes.

21 A. The budget is roughly 1.5 million for
22 this year. The staff is I guess myself and four other
23 people. The other four are on a contract, as well as a
24 series of consultants and contractors.

25 Q. So I take that you are the only MNR

1 full-time employee who is dedicated to this endeavour?

2 A. Yes.

3 Q. Good luck. Now, I think yesterday
4 you also said that the MNR will soon be trying to
5 calculate forest revenue and forest expenditure in the
6 same manner that the private sector does. Do you
7 recall that evidence?

8 A. Yes, I do.

9 Q. Are you telling me to date the
10 Ministry has generally not used generally accepted
11 accounting principles?

12 A. The government does not use generally
13 accepted accounting principles.

14 Q. Since your program is just underway,
15 I take it that it has had little or no operational
16 impact at the local or unit level?

17 A. Once again, not yet.

18 Q. Just when do you think this program
19 will be operational -- finalized and operational?

20 A. Operationalization is very difficult
21 to estimate. The major results of the program itself
22 will start to flow by 1994 hopefully with an
23 implementable revenue system, but as far as how to
24 translate it at the operational level, that of course
25 depends on many other factors besides myself.

1 Q. Finally, Mr. Grvelines, I recall
2 hearing you say that the MNR will attempt to develop an
3 approach or methodology for the assessment of
4 socio-economic impacts.

5 Will you start by developing a provincial
6 framework or regional model that will take some time,
7 but it actually filters down to something usable at the
8 local level. Just when will this be usable at the
9 local level?

10 A. We have hired Dr. Kubursi who is
11 developing the input/output model. He is going to
12 deliver the input model to us, I guess, the late fall.
13 That will then be at the regional level. It will go
14 down to the MNR district level on an experimental
15 basis.

16 He is going to provide us with the
17 input/output level at the FMU basis, but he is not
18 confident at this point how meaningful his results will
19 be. Other than to drive it down to a smaller than
20 district level or smaller than FMU level we will have
21 to do a series of case studies.

22 Q. Okay, thank you. Mr. Gordon, can I
23 turn to you. You spent some time talking about FFT's
24 silvicultural guidelines.

25 First of all, I take it that you are

1 aware that the FFT silvicultural guidelines were in
2 fact drafted by Ontario foresters? Were you aware of
3 that?

4 MR. GORDON: A. It is my understanding
5 that there were two people involved in preparing those
6 guidelines and they were Mr. Benson and Mr. Marek.

7 Q. Would you regard Mr. Marek and Mr.
8 Benson as experienced foresters?

9 A. Yes, I would.

10 Q. Now, as I heard your evidence you
11 seemed to have condemned or criticized the FFT
12 guidelines for a number of reasons.

13 One of the reasons was that they happen
14 to have a high reliance upon natural regeneration, and
15 yet we have heard from that the Ministry is currently
16 relying upon natural regeneration to treat over
17 two-thirds of the area of the undertaking.

18 Would you call that high reliance upon
19 natural regeneration?

20 A. I would say in Ontario right now a
21 significant proportion, two-thirds, of our forests are
22 being regenerated naturally. As to whether that's
23 acceptable or not, that is another question.

24 Q. We heard from Mr. Waito that with
25 silvicultural funding cutbacks it is likely that more

1 and not less natural regeneration will be undertaken by
2 the Ministry of Natural Resources. Do you agree with
3 that assessment?

4 A. As you reduce the amount of money
5 available for the silvicultural program; i.e., the
6 regeneration program it naturally flows that there will
7 be less artificial regeneration because artificial
8 regeneration cost money.

9 Q. Now, in your overheads you used the
10 figure 30 per cent to describe the area that's
11 currently planted right now.

12 Can you confirm for me that that 30 per
13 cent figure -- does not include seeding?

14 A. That's correct.

15 Q. On the issue of regeneration, can I
16 ask you to turn to FFT condition No. 34 which is found
17 in Exhibit 2249. That is at page 16 of the document.
18 Do you have that document, Mr. Gordon?

19 A. Yes, I do.

20 Q. Now, this condition simply reads
21 that:

22 "The MNR shall ensure that rapid
23 regeneration or active revegetation
24 occurs on cut-overs in order to
25 accelerate nutrient cycling and

1 biological activities in the forest
2 floor."

3 When you went through this condition
4 yesterday, Mr. Gordon, I thought I heard you say that
5 this was a laudable objective. If it is laudable, how
6 come the Ministry hasn't agreed to it or, more
7 precisely, why don't we see it in the MNR's terms and
8 conditions?

9 MADAM CHAIR: Mr. Lindgren, which of your
10 term and condition are we on?

11 MR. LINDGREN: I am looking at condition
12 No. 34.

13 MR. GORDON: I think as a principle it is
14 a worth objective. I am not a lawyer, but I am not
15 sure that it would be appropriate to have such a
16 general criteria principle as part of the order.

17 MR. LINDGREN: Q. Well, as a forester
18 let me ask you, is that a sound principle; namely, to
19 ensure that there is rapid revegetation or regeneration
20 on a site post-harvest?

21 MR. GORDON: A. Subject to what your
22 management objectives are, I believe that pursuing
23 rapid regeneration on sites is a worth objective, yes.

24 Q. Thank you. Can I also ask you to
25 turn to condition No. 69 and this is the one that deals

1 with the marking of boundaries for reserves and AOCs
2 and other items. Mr. Gordon, this is found at page 34
3 of our terms and conditions.

4 once again, Madam Chair, this is
5 condition No. 69.

6 If I understand your testimony correctly,
7 Mr. Gordon, you didn't like this because this condition
8 put the onus squarely on MNR staff to do the marking.

9 Can you step back and can I ask you to
10 confirm that as a general principle it is important to
11 have clearly marked and accurately marked boundaries?

12 A. That is correct.

13 Q. It is not really terribly important
14 who does the marking as long as they are clearly marked
15 and accurately defined?

16 A. That's correct and that's the point
17 of my concern. When I read your proposal you are
18 saying that the line shall be clearly flagged by MNR,
19 and I think the issue is, it has to be flagged
20 properly.

21 Historically some companies have shown
22 the capability to mark boundaries as well and in some
23 cases better than MNR personnel. So, therefore, where
24 it is working let it continue to work.

25 Q. I think that's a valid point, Mr.

1 Gordon. So would you have any objection if FFT were to
2 revise this condition, take out the reference to MNR
3 staff in the field and simply say in the opening flush
4 the MNR shall ensure that these locations are properly
5 marked leaving it open to the Ministry to do it itself
6 or get company staff to do it where appropriate?

7 Would you have any objection to that?

8 A. That to me appears at face value a
9 reasonable proposition.

10 I would like to make one comment on one
11 of your first questions. You made the comment about
12 the experience, do I believe that Mr. Marek and Mr.
13 Benson are experienced foresters. There is no question
14 that they are.

15 However, we must recognize where their
16 experience lies and Mr. Benson worked in the forest
17 quite a number of years ago and Mr. Marek has numerous
18 years of experience in a specific locale within
19 Ontario.

20 What we tried do in our review was put
21 together a number of foresters across the province
22 whose experience was related to specific areas and we
23 based our critique on the experience of the number of
24 foresters.

25 Q. Well, Mr. Gordon, I can assure you

1 that that issue of credentials and experience and
2 expertise will in fact be addressed in final argument
3 and I would suggest to you that's the appropriate place
4 to raise this kind of concern.

5 Now, Mr. Kennedy --

6 MR. FREIDIN: You raised it, Mr.
7 Lindgren.

8 MR. LINDGREN: Q. Mr. Kennedy, just
9 finally on the issue of flag, can you confirm for me
10 that the Crown Timber Act currently allows the Ministry
11 to require companies to mark boundaries at their own
12 expense?

13 MR. KENNEDY: A. Yes. The Crown Timber
14 Act contains an enabling clause where the Crown can
15 assign marking, costs to the company, as I indicated
16 yesterday.

17 If you would permit me before you leave
18 term and condition 69 in your proposal, I think, as Mr.
19 Gordon has indicated, the intent is just fine.

20 I would have some concerns if I was
21 charged with implementing it the way it is currently
22 worded. I would have some concerns with regards to the
23 suggestion of marking road corridors as is currently
24 used in the MNR terminology.

25 This would be a proposal I think that

1 would not have any specific value since road corridors
2 are further refined to specific road locations and I
3 believe that is what your intent is when you use the
4 word alignment.

5 I would also have concerns from the
6 practical implementation point of view and the cost
7 perspective about marking all landings.

8 MNR has chosen not to make a requirement
9 of that nature. Instead, we use the guideline approach
10 and we have the Code of Practice for riparian areas in
11 place which provides guidance and location of areas.

12 Specifically in conjunction with riparian
13 zones, I don't think there is a necessity to mark land
14 in all areas as is suggested in your term and
15 condition. Those are the types of things I would be
16 concerned about with the specific wording I see before
17 me today.

18 Q. Mr. Kennedy, the term and condition
19 goes on to require routine checks or monitoring by the
20 MNR to make sure the boundaries are properly marked and
21 subsequently complied with.

22 Do you have any difficulty with that
23 general principle; namely, pre-operational checks and
24 post-operational monitoring?

25 A. I have no difficulty with the

1 principle and I would indicate that our area inspection
2 program has that type of intent in mind in the
3 requirements.

4 I would make one caution however, Madam
5 Chair, on the item that I quote:

6 "Such flagging shall occur before the
7 commencement of timber management
8 operations..."

9 Stopping there. In many operations it is
10 a practical approach to mark as you go. So that it
11 would be unreasonable and I believe unnecessary to
12 suggest that at the outset of an annual work schedule
13 that the marking is in place for an entire year's
14 operation.

15 Instead, it is common practice to mark
16 several weeks to several months in advance of
17 operations and on some occasions to mark an entire,
18 say, water course or entire road alignment which may be
19 occurring prior to the commencement of the operations.
20 I wouldn't want anyone to interpret that as that all
21 marking must be in place prior to April 1 at the
22 commencement of operations.

23 Q. Thank you, Mr. Kennedy. Mr. Gordon,
24 if I can refer to you. Can I ask you to turn to Tab 3
25 of the witness statement where you offered some

1 detailed comments on the guidelines. Can I first
2 direct your attention to page 3 of Tab 3.

3 Now, in the middle of the page, Mr.
4 Gordon, you have reproduced the opening flush of FFT
5 No. 29 which indicates that when the planning team is
6 developing prescriptions they should have regard for
7 the following guidelines.

8 Now, it seems to us, Mr. Gordon, and I am
9 going to give you an opportunity to respond, but it
10 seems to us that the MNR has deliberately or otherwise
11 misconstrued the nature of these guidelines.

12 We used the word guidelines because we
13 thought that's a term of art that had some meaning to
14 the MNR seeing as they have used guidelines in a number
15 of other contexts.

16 So, first of all, can I ask you to
17 confirm these provisions in are in fact called
18 guidelines? Can you confirm that for me?

19 MR. GORDON: A. Yes, they are called
20 guidelines.

21 Q. They are not called rules?

22 A. No, they are called guidelines.

23 Q. And they are not called standards?

24 A. They are not called standards here.

25 They were called standards before you changed the word

1 standards to guidelines. You have left the term
2 standards within the table of context, but I assume
3 your intent is to have this wording as it is now,
4 silvicultural guidelines.

5 Q. That's right. I take it that we can
6 agree that there is a significant and substantial
7 difference between a standard and and a guideline?

8 A. Depending on what context you are
9 using those words.

10 Q. Well, when I speak of a standard I am
11 thinking of something that sets out mandatory
12 requirements. A guideline is something that sets out,
13 in a permissive fashion, what you might want to do or
14 what you might like to do. A guideline infers or
15 contains a degree of flexibility.

16 Would you agree with that general
17 description?

18 A. I agree with that. However, then I
19 go to your term and condition 32 and it clearly says to
20 me that you must do what is outlined in 29 unless you
21 can come up with an exception as to one of your
22 clauses.

23 I think condition 29 in conjunction with
24 32 puts a slightly different light on how you are using
25 the label guideline. Unless you can read one of your

1 exception criteria you must do what is within condition
2 29 and that's how we are reading it.

3 If we are reading it incorrectly, please
4 tell me so.

5 Q. Mr. Gordon, I can tell you point
6 blank you are reading it incorrectly and, quite
7 frankly, we are amazed that this could possibly happen
8 given the language that is used.

9 MR. FREIDIN: Let's cut out the editorial
10 comments and ask the questions, please.

11 MR. LINDGREN: Q. Mr. Gordon, you have
12 moose guidelines that are subject to an exception
13 reporting requirement and that is not dissimilar to the
14 approach that's taken here.

15 In that context, can you confirm for me
16 these guidelines are intended to be guidelines based on
17 the language that's found in the Ts and Cs?

18 MR. GORDON: A. I can't put my hands
19 right now on the moose guidelines, but I believe that
20 the way the guidelines -- those ones are written there
21 is some general direction on such things as a range of
22 clearcut sizes.

23 When I read your guidelines, as you call
24 them, you have such wording in condition 29, as it says
25 at the bottom of page 3, 'shall be conducted.'.

1 In your T and C 29(c) you say 'as and
2 shall be utilized', in T and C 29(d) you say that the
3 white pine, the uniform shelterwood method 'shall be
4 utilized.'

5 So I see a slightly different wording in
6 your guideline and, again, when I put it in conjunction
7 with your exceptions clause we view the words as
8 written as showing a different intent.

9 Perhaps when you rewrite the guidelines,
10 as I believe you said you were going to do yesterday,
11 perhaps we are misreading your intent the rewriting may
12 make it clearer to us because I fully support -- if you
13 are promoting some flexibility I fully support that.

14 Q. Well, that's precisely what we think
15 is already engendered in these conditions, and let me
16 refer to condition 29, the opening flush again, where
17 the phrase 'shall have regard for' appears not once but
18 twice.

19 Can you confirm for me that 'have regard
20 for' generally means take into account and take into
21 consideration? It doesn't mean slavishly following it,
22 does it?

23 A. Can you refer me to the passage
24 again, please.

25 Q. I am looking at Tab 3, page 3 where

1 you have reproduced the first paragraph of item No. 29
2 and it says "shall have regard for' twice. Doesn't
3 that infer flexibility?

4 A. That does and then later on, though,
5 you start using the term shall.

6 In actual fact, based on what you are
7 telling me right now, it is somewhat contradictory I
8 believe in how you have written it.

9 Q. Now, condition 29 refers to
10 conditions 27 and 28 which you haven't reproduced in
11 your critique here.

12 So can I ask you to turn first to
13 condition No. 27 which is found at page 11 of our terms
14 and conditions. Condition 27(1) provides that:

15 "The MNR shall ensure that the
16 development and implementation of the
17 silvicultural ground rules maintains the
18 long-term ecological sustainability and
19 biological diversity of a forest within
20 the area of the undertaking."

21 Again, my notes indicate that yesterday
22 you suggested that some of these general principles and
23 objectives are laudable. Again, is this a laudable
24 objective and, if so, why hasn't the Ministry of
25 Natural Resources put something like this in their

1 terms and conditions?

2 A. We believe that such general
3 principles and criteria as you carry on in condition 28
4 in many cases at a general level we can agree with the
5 general intent. We do not feel such general principles
6 are appropriate in a Board order.

7 No. 1, it will be difficult to determine
8 whether or not you are meeting the intent of the Board
9 order because they are so general.

10 Q. Again, I am going to refer to MNR
11 Direction 90s. You don't have to pull it out. I am
12 just going to read one bullet point found in that
13 document and this is found at page 8.

14 The first objective listed by the
15 Ministry of Natural Resources and endorsed by your
16 Minister is to ensure the long-term health of
17 ecosystems by protecting and conserving our valuable
18 soil, aquatic resources, forest and wildlife resources
19 as well as their biological foundations.

20 I am going to suggest to you that that's
21 not dissimilar to the objective that FFT has set out in
22 No. 27. Are you saying it is inappropriate for this
23 Board to put in that kind of an objective into its
24 decision and into its terms and conditions?

25 A. What I will say is I feel that's a

1 more appropriate document for such statements.

2 MR. GREENWOOD: A. Mr. Lindgren, if I
3 could as well.

4 I think we are into the area that Mr.
5 Martel brought up yesterday rather succinctly, the
6 difference between a concept and a term and condition
7 which then must be applied in the field, measured and
8 determined whether we are meeting that regard.

9 Direction 90s sets that, it sets a
10 direction. Your term and condition uses words 'shall
11 ensure.' I think there is quite a distinction between
12 a conceptual direction and a term and condition applied
13 by a Board with words 'shall ensure.'

14 I can inform the Board that with respect
15 to those directions I have spent the past year
16 struggling on an inter-Ministry task force with just a
17 word like biological diversity and what that means in a
18 concrete way.

19 Therefore, when you see a term and
20 condition like this conceptually, I don't think anybody
21 on this panel has a problem, but terms and conditions
22 must be applied on the ground and if, in fact, we are
23 to sit down and discuss not conceptually but
24 practically what biological diversity of the forest
25 means we would into the overhead that I showed

1 yesterday in the growth and yield program and we need a
2 car.

3 Conceptually no problem, but when you
4 start defining exactly what that means in terms of its
5 application there is major problems and both of the
6 terms that you have chosen here I know in the
7 scientific community have not been nailed down to a
8 practical level and when it starts being applied in a
9 term and condition, the field foresters that reads this
10 term and condition is going to struggle with that
11 greatly.

12 So, again, I don't think conceptually
13 there is a problem, but in most of these circumstances
14 where we are using language like that, when you attempt
15 to put that into practical terms it is a different
16 story.

17 MR. KENNEDY: A. Mr. Lindgren, if I may
18 add to the comments of my colleague.

19 I believe you and I exchanged some words
20 on this matter in your cross-examination of MNR Reply
21 Panel 3 where I echoed the very sentiments that these
22 two colleagues of mine have indicated to you, that when
23 writing terms and conditions MNR has looked at them as
24 they are intended to be, as we understand it, legally
25 binding terms and conditions that must be implemented.

1 We must be able to be accountable for
2 them, measured against our progress or adherence to
3 them and when confronted with principles or concepts
4 which we may well agree with, if we are unable to
5 ground them in on-the-ground measure ways of ensuring
6 that we can achieve them it becomes such that we do not
7 accept them as terms and conditions.

8 Q. I think we will have to agree to
9 disagrees on whether or not a principle like this
10 should be in the terms and conditions, but if I
11 understand you correctly, Mr. Kenny, I think you just
12 told me the MNR has no way of judging whether or not
13 its practices are in fact maintaining biodiversity in
14 the province. Is that what you just said?

15 A. I don't believe that's what I have
16 just said, no.

17 I think there is, as indicated by other
18 members of the Panel 3, there are a variety of
19 initiatives underway moving us towards landscape
20 management as a means of addressing biological
21 diversity concerns and that today there is no single
22 measure that I have heard come forward by any party at
23 this hearing - I see considerable debate in popular
24 press and in scientific literature - as just to how one
25 records the current situation today and indeed sets

1 objectives and moves them towards them.

2 I would ask Dr. Abraham to contribute
3 further to that if he feels it is appropriate.

4 Q. Dr. Abraham will have an opportunity
5 I am sure in reply or re-examination to do just that.

6 I would like to return --

7 MR. FREIDIN: Just hold on.

8 MR. LINDGREN: Madam Chair, this is my
9 cross-examination. Mr. Freidin has ample opportunity
10 to allow Mr. Abraham or any other member of this panel
11 to respond to any issue raised in cross-examination.
12 Mr. Freidin cannot stage manage my cross-examination.

13 MR. FREIDIN: I am not suggesting to be
14 stage managed, but we have agreed this particular
15 hearing would have panels and we have panels in order
16 that the Board could be provided with information on
17 the subject matter that they are interested in and it
18 has been customary throughout this hearing that matters
19 could be dealt with by different members of the panel
20 on cross-examination as well as in direct.

21 MADAM CHAIR: Mr. Lindgren, you can
22 proceed with your cross-examination without any further
23 interruptions.

24 Mr. Martel did have a question.

25 MR. MARTEL: I am somewhat confused, I

1 have to confess, because I keep hearing how we are
2 going to have biodiversity and landscape management and
3 I think I have raised this three or four times in the
4 last number of weeks, if we have decided in the
5 scientific community or anywhere else what these really
6 mean. These are all new terms just out, some of them
7 within the last year and a half.

8 I haven't seen anywhere or read anything
9 yet that has been put forward to us what these are
10 specifically. I think we went through in Panel 3.

11 So I am going to ask the question. Can
12 anyone tell me if we have specific ways of ensuring
13 biodiversity, of introducing tomorrow landscape
14 management or are these just new buzzwords that we
15 haven't flushed out yet in order to be able to achieve
16 them?

17 DR. ABRAHAM: Mr. Martel, some of the
18 words that you have been hearing have been in the
19 literature for up to 15 years now, but it is a common
20 axiom in science, particularly in academics, where it
21 takes a while for these things to be discussed, to be
22 debated, to be refined and for common definitions and
23 understandings to be developed.

24 We are at the point now where these words
25 are becoming used in the public domain a lot, which

1 does not necessarily help in the resolution or
2 definition of what the terms are.

3 Some of the things -- one of the
4 questions you just asked was, are we at the point where
5 we can ensure the continuation of biological diversity.

6 I don't think we are at the point, no. I
7 don't think we have techniques where we can ensure the
8 continuation of biological diversity, but that word
9 would have to be used against the objectives that you
10 will be measuring for.

11 In the evidence that I led in Panel 3 and
12 in discussion we had in cross-examination we discussed
13 at length the complexity of biological diversity.

14 It is not a static measurable -- it is
15 measurable, but it has many, many components and while
16 one component of diversity is static, some other one
17 might be moving in another direction.

18 To suggest that we have now techniques
19 which would ensure biological diversity is overstating.
20 To suggest that we have ways of measuring it, that's
21 certainly true, but there are many measures of
22 biological diversity, some more common than others,
23 some more widely used, but they can be applied to
24 species diversity, genetic diversity, structural
25 diversity and all of them have certain limitations.

1 What I would say is that diversity in the
2 common lexicon is not the same at biological diversity
3 in sum or in total as it is meant and as it is used now
4 in both the scientific and popular literature.

5 We are at the point where we are
6 introducing techniques for landscape management and
7 further developing techniques for measuring biological
8 diversity and I think, as we have stated both in the
9 written text in Panel 5 and in Panel 3, movement
10 towards landscape management and with all that entails
11 in terms of measurement of biological diversity in
12 attempting to ensure -- attempting to strive to the
13 point where loss of biological diversity in specific
14 senses like loss of species, loss of necessary
15 complexity or structure in the ecosystem, those are
16 things that we are moving towards.

17 If you use the word introducing
18 techniques to do that, I think, yes, we are getting
19 very close to introducing it and there are some
20 experimental or case examples of where that is going
21 on.

22 MR. LINDGREN: Q. Dr. Abraham, a couple
23 of questions arising out of that testimony.

24 I take it that you would have no
25 objection to the principle that biodiversity should be

1 maintained, and I take it you would no objection to a
2 requirement that the MNR continue to develop or
3 implement landscape management or biodiversity
4 management techniques.

5 DR. ABRAHAM: A. In our terms and
6 conditions we have made the commitment to develop such
7 technologies and for me that means with an eye towards
8 applying them where appropriate, when they are ready
9 and when they are appropriate.

10 Something you said there in terms of
11 requirements, again, the goals, and we have stated this
12 in a couple of places, for example on page 20 of the
13 witness statement we have indicated that the goal --
14 that we share goals in terms of ensuring biological
15 diversity. That is as quoted in Direction 90s and
16 other documents which I have referred to in Panel 3. I
17 have no problem with that goal of trying to maintain
18 biological diversity.

19 What we have said, and I will repeat
20 here, is that the techniques to do that we don't think
21 are currently available to ensure, to assuredly
22 maintain biological diversity.

23 Specifically we would indicate that the
24 desired objectives, whether we are to maintain current
25 biological diversity or to restore biological diversity

1 to levels that occurred prior to European settlement,
2 whether we are to reach a forest standard that was
3 present in 1950, those things have not been reached by
4 consensus and I think that without that there is great
5 difficulty in determining what the techniques or what
6 approaches you apply.

7 Q. Well, you have referred to page 12 of
8 Tab 3 of the witness statement. I am just going to
9 read one sentence in and this is in the fourth
10 paragraph - I take it this is your language:

11 "One of FFT's goals and indeed one of
12 our own is to conserve the diversity of
13 forest wildlife on a continuing basis."

14 I think you have indicated you have got
15 no difficulty with our condition, I guess, 53 that
16 requires the maintenance of biological diversity.

17 Aside from the issue of whether or not
18 that kind of condition is legally enforceable, as a
19 professional biologist would you like to see that kind
20 of principle expressed in the Board's decision and
21 codified in the terms and conditions?

22 You just indicated that in fact the
23 Ministry shares that goal. If so, would you like to
24 see it expressed somewhere besides a witness statement?

25 A. I previously indicated that it has

1 been expressed in several Ministry documents and there
2 is a currently under development a government statement
3 or at least an MNR statement, depending on its status,
4 on the conservation of biological diversity.

5 This is where I think it is appropriate
6 to have that. I am hoping very sincerely that it will
7 be done there.

8 Q. Are you saying as a professional
9 biologist that you would prefer not to have the
10 principle or any language related to the maintenance of
11 biological diversity reflected in the Board's terms and
12 conditions in this kind of hearing?

13 A. I simply have to indicate that I
14 don't know the weight or the specific language that a
15 Board term and condition -- or that a Board order would
16 carry; therefore, the sufficiency or the necessity to
17 have it in the Board order is something that's beyond
18 my personal expertise.

19 What I am indicating is that my only
20 difficulty with 5(3) as expressed in terms of the goal
21 is its achievability and as a professional biologist I
22 indicate that the achievability of that specific -- of
23 the general principle, as my co-members on the panel
24 have indicated, is the difficulty in terms of the
25 language that's specifically laid out here.

1 Q. Finally, Dr. Abraham, in your
2 response to Mr. Martel you have indicated that Ministry
3 is currently undertaking some biodiversity initiatives,
4 at least on an experimental basis.

5 It is my understanding of North Bay TDUs
6 are undertaking that kind of work right now. Can you
7 offer any particulars or any details on that or any
8 other biodiversity initiative undertaken by the
9 Ministry?

10 A. That information was referred to in
11 Panel 3. Can you be specific about the North Bay
12 initiative that you are thinking about?

13 Q. I can't give evidence, Dr. Abraham.
14 Are you aware that the North Bay TDUs in fact undertake
15 biodiversity initiatives?

16 A. I understand that they are looking at
17 ways of using working groups, forest resource inventory
18 groups as a measure of looking at landscape diversity
19 or structural diversity.

20 Q. Mr. Gordon, perhaps we can move from
21 general principles to more specific objectives.

22 Yesterday Madam Chair offered what I
23 think was a quite accurate summary of the thrust of
24 FFT's cases; namely, we would like to see use of --
25 more use of planned natural regeneration, we would like

1 to see a range of cut sizes so as to protect and
2 maintain biodiversity.

3 Again, does the Ministry have any
4 particular quarrel with those objectives?

5 MR. GORDON: A. Just so I have them, it
6 was more planned natural regeneration and a range of
7 cut sizes?

8 Q. Correct.

9 A. I will work backwards. I believe in
10 general terms we would agree with the range of cut
11 size. However, it should be a range of cut sizes that
12 is appropriate for the forest conditions and
13 disturbance patterns that you have naturally within the
14 forest and we should try to some degree to emulate them
15 within our capabilities.

16 As far as more planned natural
17 regeneration, where you have science or experience that
18 supports that certain natural regeneration methods will
19 work and those natural regeneration methods would meet
20 your management objectives, then it is appropriate to
21 use such.

22 However, I just cannot categorically say
23 that we should do more planned natural regeneration at
24 this point in time in Ontario because based on our
25 knowledge and the science available to us more planned

1 natural regeneration or just moving towards more
2 natural regeneration and do less artificial
3 regeneration will result in a significant shift in
4 forest composition and that the hardwood component will
5 increase and the conifer and balsam fir will increase.

6 So while it sounds like a simple
7 statement to agree to it is much more complex than that
8 if you take into account what your management
9 objectives are.

10 Q. Well, again, I recall a statement
11 from you yesterday to the effect that if natural
12 regeneration is going to work you probably should or
13 you could undertake it on a particular site.

14 Do you recall that testimony?

15 A. I don't recall those exact words. I
16 may have said those yesterday and what I would say
17 today is, yes, you should undertake that type of
18 treatment if it works and if it meets your management
19 objectives.

20 For example, if you go to Sweden or
21 Finland where active silvics of the species and the
22 site conditions actually would allow you to do more
23 natural regeneration, in actual fact they do much less
24 natural regeneration than we do here in Ontario and
25 that's in part because they want to ensure that they

1 have got a wood supply and they want to reduce the risk
2 in their regeneration programs.

3 So while they actually have the
4 capability to use more natural regeneration techniques,
5 they using it a lot less than us. So it has to be
6 taken into account with the site conditions, the
7 silvics of your species and your management objectives.

8 MR. MARTEL: How can we know what that
9 is, the objectives and so on, until we get a new forest
10 production policy before us to answer the question so
11 MNR itself can determine what the objectives are, what
12 amount of sustainable fiber that's required and so on?

13 It seems to me we are still kind of
14 adrift on that, on what those goals are, until we have
15 a forest production policy in place that's not out of
16 date by 20 years.

17 MR. GORDON: I think that's a valid point
18 that you are making. I think we also have to recognize
19 that even with such a new policy, that after you had
20 such a policy over time your objectives for the forest
21 will change and you will gain new information on how
22 your forest works or doesn't work. So you will
23 continually have to make new adjustments.

24 I don't think it is as simple as having a
25 number and, therefore, all of our problems or

1 directions are figured out for us. It will still
2 continue to be a complex problem.

3 MR. MARTEL: I understand that, Mr.
4 Gordon. My difficulty is that we don't seem to know --
5 we have sustainable forestry - a nice word or couple of
6 words - but what does that mean in the real world?

7 What are we aiming for and how can we
8 determine where we are going to do the type of
9 artificial regeneration that need be done in order to
10 achieve the fiber requirements and at the same time
11 take everything else into consideration in the forest?

12 You know, how we are going to protect
13 recreational areas, how we are going to -- if we could
14 get that down and find a pattern of adjusting it every
15 four or five years one might be aiming at something
16 that's workable, but to not even have -- unless you are
17 still accepting the original document, was it 9.1
18 million cubic. It seems to me that it is almost adrift
19 until you make that determination on which you base all
20 of your planning in an aggregate form across the
21 province.

22 MR. KENNEDY: Mr. Martel, I don't think
23 we are adrift. I think the point that you raise is a
24 very important one. It has not gone unnoticed by MNR.
25 Certainly there have been initiatives in the past to

1 keep our what was then the forest production policy up
2 to date.

3 It has been recognized that those
4 initiatives have not really come through and that is
5 why it has arisen again as part of a timber production
6 policy program.

7 It is also recognized that we can't do
8 that in isolation within with MNR behind close doors
9 and we will be going public with that process.

10 We see that that is proceeding in a
11 proper time frame, looking at the level of production
12 that should be available in the province with
13 determination by the public and that what we are doing
14 here at this hearing before you, Madam Chair, is to
15 ensure that we have a range of methods available to us
16 to put in place to meet those objectives.

17 We are here before you describing the
18 kinds of techniques that we will use in order to manage
19 the forest at whatever level the public of Ontario
20 decide they want to have it managed at to produce
21 products.

22 MADAM CHAIR: Sorry, I didn't want to
23 interrupt your cross-examination, Mr. Lindgren, but the
24 Board has your very clear written response to our
25 interrogatories to the effect that MNR cannot promise

1 to deliver constant even flow of any particular species
2 from any particular area, part of the area of the
3 undertaking and we understand the difference you make
4 with respect to some kind of a sustainable supply of
5 fiber to industry.

6 I think Mr. Martel's question, though,
7 has to do -- and we understand that we are not going to
8 get your timber production or forest production policy
9 in front of us, and I don't know when you are going to
10 have those available, but we are not sure whether or
11 not we are going to get them before we make our
12 decision and we consider ourselves to be handicapped in
13 that way, talking about sustainable supply,
14 sustainability in general.

15 I think the point Mr. Martel is trying to
16 get to, however, is with respect to how much more
17 artificial regeneration do we do with respect to in the
18 sustainability context.

19 It seems to us that what you are saying
20 is that your artificial regeneration is driven by
21 management objectives, but certainly when we look at
22 what makes those decisions it has to do with the size
23 of the harvest area and it has to do with the size of
24 your budget.

25 Now, of course, it has to do with

1 individual decisions by foresters and management
2 objectives and so forth, but with respect to some great
3 scheme overall in the area of the undertaking and how
4 you shift between artificial and natural regeneration,
5 I guess we will keep asking you questions about that
6 until the end of the hearing.

7 MR. KENNEDY: Madam Chair, if I may make
8 an attempt to clarify one point that perhaps was not
9 clear yesterday is that it is wrong to go away with the
10 impression that our artificial regeneration program is
11 directed towards a particular budget level, that we are
12 allocated a certain amount of dollars and we go out and
13 look for sites to treat with it. If that impression
14 has been left with you that is a wrong one and I
15 apologize for what.

16 Does occur in our budgeting process is it
17 is from the bottom/up from foresters and technical
18 staff looking at the sites that they have to deal with
19 in the field, the time of harvest and post-harvest,
20 determining what the appropriate silvicultural program
21 is for those sites based, yes, on the available
22 methodologies they have, bases on the available
23 regeneration stock both in nursery bareroot stock and
24 container stock and availability of the seed and most
25 factors get broke up into requests for dollars at the

1 provincial level and the total requests do not always
2 come back in the manner that we asked for them.

3 Those levels of regeneration are
4 discussed in the timber management plan, of course, to
5 meet the timber management objective as set out in the
6 individual plans in recognition of the biological
7 capability of the land base and the local demands
8 placed by mills.

9 It is in that fashion that we go about
10 determining the level of our artificial regeneration
11 program that we are experiencing now.

12 If in the future through the timber
13 production policy, through the public input that goes
14 on with the development of that, if the level of
15 productions hypothetically tripled or cut in half, I am
16 sure that will affect the level of program that we put
17 in place.

18 The important thing is that the tools
19 that we used to manage the forest will be the ones that
20 we have described to you here at this hearing.

21 MADAM CHAIR: One further point, Mr.
22 Kennedy, and that is certainly in the silvicultural
23 cost comparison exercise and in some of the previous
24 reply evidence I think MNR has taken a fairly clear
25 position that without artificial regeneration - and no

1 one has suggested at this hearing there shouldn't be
2 some artificial regeneration - but I think MNR's
3 position has been without that you certainly couldn't
4 ensure or continue to deliver a sustainable supply of
5 fiber to industry if you to rely entirely on natural
6 regeneration.

7 MR. KENNEDY: That is correct. Our
8 current level of knowledge is such that there are sites
9 out in there in our opinion that require artificial
10 regeneration techniques.

11 Looking to the future, we do not see any
12 other options for some of those sites. We are,
13 however, trying to improve our bag of tricks, as we
14 say, or the methods available to us, refining the
15 current techniques we have to improve our abilities in
16 the area of natural regeneration and to provide
17 foresters, technical staff with a greater number of
18 techniques in that regard, but it is true that there
19 are sites now that will continue to require artificial
20 techniques.

21 MR. MARTEL: But wouldn't it be easier -
22 none of this is easy - but easier if we knew what the
23 requirements would be and could adjust that to meet
24 needs in determining and planning for other activities
25 or other uses of forestry?

1 In other words, if we knew how much we
2 were going to need over the next 20 years, doesn't it
3 help you to determine, to meet those objectives, the
4 type of funding you can ask government for, not by year
5 by year but over a long-term?

6 Doesn't it make it easier for you to plan
7 for the continued operation, for example, of a tourist
8 operation by it by being able to manipulate a little
9 more?

10 I mean, if we had an objective on fiber,
11 it seems to me that we can plan our other forest uses
12 and, again, I use the word easier, but not in the sense
13 that it is simple, but that it might make it easier to
14 determine how we allocate the various resources to
15 various groups and until we get that bottom line that
16 becomes much more complex.

17 MR. KENNEDY: Mr. Martel, you have very
18 well described the kind of challenges that are before
19 MNR and have been before MNR before time began.

20 It would be much easier for us to manage
21 forest resources if there were clearly defined policies
22 in place at the government level, clearly defined
23 objectives for a variety of uses, and the example you
24 just just mentioned, if there is a defined objective
25 level for timber production, it would assist us in

1 designing our program. We would design a program to
2 meet that objective with a mix of techniques available
3 to us today.

4 In terms of does that help us better deal
5 with a tourism outpost camp or lodge, to a point it
6 does. We believe we have put forward to you a
7 reasonable manner in which to manage those resources.

8 We still end up in conflicts, though, as
9 you are well aware. If the Ontario government had a
10 tourism policy and a remote tourism policy with
11 objectives in mind and indicated that the Ontario
12 government had desire to maintain tourism levels in a
13 particular fashion, be they road based or remote, and
14 equate it down to tourism plans, business plans that
15 outline various desired levels of outpost camps in
16 particular locations in the province, I am sure that
17 would have a great influence on the character of the
18 way in which we conduct our timber management program.

19 In the absence of that, though, we have
20 put in place our program which you have heard me repeat
21 many times and I will just highlight by saying consists
22 of at the outset of planning to identify the values
23 that are in the forest and to carry out the area of
24 concern planning process where we do not eliminate any
25 concern or value that is brought forward out of hand.

1 We instead intend that the process be
2 applied by embracing those values, concerns that are
3 brought forward, we document them and to go about
4 determining how we can conduct our timber management
5 operations or, indeed, if it is possible while
6 predicting those values and concerns and develop
7 appropriate prescriptions.

8 I believe, Mr. Martel, that that is the
9 best that we can do at this time without all of the
10 types of information that you have mentioned, but that
11 continues to be the challenge that MNR faces and why we
12 pursue such things as the timber production policy.

13 MR. GRVELINES: May I add something to
14 that.

15 MADAM CHAIR: Certainly, Mr. Grvelines.

16 MR. GRVELINES: The difficulty with what
17 you are suggesting by relying upon the timber
18 production policy is that then you would be treating
19 all other users as constraints upon the timber
20 production policy.

21 I think from my perception of where you
22 are going is almost a business plan for all users on a
23 TMP with a 20-year business plan where everyone would
24 sort of identify where they wanted to go in the next 20
25 years to the best of their knowledge.

1 I think then you are into an order of
2 magnitude much greater than a timber management plan.
3 I will just leave it at that.

4 MR. ARMSON: Madam Chair, might I be
5 permitted a very brief observation. It relates to Mr.
6 Lindgren's concerns.

7 I would, first of all, concur with Mr.
8 Martel and what Mr. Kennedy has said about having a
9 defined goal. I think that is part of our problem.

10 But I think what has happened, very
11 briefly, is that artificial versus natural, to a
12 forester, to a professional forester, the concern of
13 regeneration, artificial and natural, are means of
14 ensuring regeneration coming about and, as Mr. Gordon
15 said, we take into account objectives and the nature of
16 the forest and the availability of means to carry it
17 out.

18 What has happened I believe, as evidenced
19 in the FFT silvicultural guidelines, is that artificial
20 and natural regeneration have become surrogates for the
21 concepts of biodiversity, intensive forestry and so on
22 and this is in my view has somewhat muddled the waters
23 and, therefore, the wording is the problem.

24 I think if we were to dismiss the idea
25 that artificial regeneration and natural regeneration

1 are somehow representative of two types of ecological
2 ways of approaching a situation they may have different
3 ecological impacts. May have, not will have, may have.

4 I think that's part of our problem here.
5 I think it is almost intensified by fact that
6 statistics as presented by the Minister over the years
7 has been acres harvested, acres artificially
8 regenerated or naturally. It has brought the division
9 there in thought and as soon as you say artificial it
10 can't be natural sort of thing. If it is natural
11 regeneration it must be good. That I think is part of
12 our problem.

13 MADAM CHAIR: Thank you.

14 Mr. Armson, just a quick comment on that.
15 What the Board has heard from Forests for Tomorrow and
16 the satellite hearings is that many non-timber users
17 are concerned about the intrusive nature of timber
18 operations and that flows from harvesting and road
19 building before we get to the issue of regeneration at
20 all, but I understand what you are saying.

21 Sorry, Mr. Lingren.

22 MR. LINDGREN: That's fine, Madam Chair.
23 Your questions have raised a number of important
24 issues, including the new timber production. I am not
25 going to seize on many of the issues, but I do have a

1 couple of questions arising out of that discussion.

2 Q. Mr. Kennedy, it is my understanding
3 that the Ministry of Natural Resources is currently
4 developing a remote tourism policy in conjunction with
5 the Ministry of Tourism and Recreation.

6 Can you confirm that?

7 MR. KENNEDY: A. Actually, I'm not in a
8 position to confirm that. I'm aware that numerous
9 discussions have occurred on the issue, but I can't
10 comment on the status of it today.

11 Q. Is anyone on the panel aware of an
12 initiative by the Ministry of Natural Resources to
13 develop a remote tourism policy with MTR?

14 In the absence of an answer, Mr. Kennedy,
15 can I ask you to make the necessary inquiries and
16 advise the Board and the parties in writing as to the
17 nature and status of the development of a remote
18 tourism policy with the MNR and MTR?

19 A. I most certainly will do so.

20 Q. Mr. Gordon, going back to you, you
21 said few minutes ago that if you follow FFT's
22 silvicultural guidelines we will end up with more
23 hardwood.

24 Were you a member of the silvicultural
25 costing committee?

1 MR. GORDON: A. No, I was not.

2 Q. Did you read the report?

3 A. I read the report. I can't guarantee
4 that I read every single page. There was an awful lot
5 of tables.

6 Q. Well, I took Mr. Callaghan through
7 some of those tables and he agreed with me that the
8 committee found that both FFT scenario one and FFT
9 scenario two ended up with as much as or more conifer
10 than the present practice alternative. You said this
11 morning -- namely, you will end up with 80 to 90 per
12 cent confer.

13 Now, you said this morning that's not the
14 case, you will end up with more hardwoods. So are you
15 disagreeing with Mr. Callaghan and the committee's
16 assessment of the silvicultural implications of FFT's
17 guidelines?

18 A. I think you are misinterpreting
19 whatever Mr. Callaghan said. If you will give me a
20 moment to find Mr. Callaghan's overheads, then I would
21 like to have a discussion with you.

22 Q. Perhaps you can dig them out at the
23 break and we can have a discussion then. Mr. Gordon,
24 we will come back to this. I will give you a chance to
25 dig them out.

1 Returning generally to FFT's
2 silvicultural guidelines. As I understand it one of
3 the Ministry's main concerns is that FFT's detailed
4 working group prescriptions take away much of the
5 flexibility and professional judgment and views by
6 foresters.

7 Is that a correct assessment one of the
8 main concerns you have?

9 A. That's one of the main concerns and
10 as well, on many sites the general direction that the
11 guidelines seem to be trying to push us will not bring
12 back a significant conifer component.

13 Q. We will return to that one in a
14 moment, but let me put this hypothetical to you. If
15 the silvicultural guidelines were revised so as to
16 amend or delete some of the working group prescriptions
17 and if some of the more general objectives and
18 principles were flushed out in perhaps more greater
19 detail so as to allow managers to develop their own
20 suitable techniques, you know, their own mix of natural
21 and artificial regeneration so as to meet management
22 objectives, would that tend to alleviate some of your
23 concern about the restriction upon professional
24 judgment?

25 A. It will probably move in a direction

1 that we would be more comfortable with. However, I
2 can't categorically agree or disagree. I would have to
3 see the final wording.

4 As well, based on the description you
5 have just given me, I would wonder if you have
6 described what MNR's proposal is in that we have
7 silvicultural ground rules that are developed at the
8 management unit relative to the site conditions and
9 management objectives. We have our silvicultural
10 guidelines. It depends how far you go.

11 Q. But I take it the MNR would be,
12 should I say, happier if some of the detailed
13 particulars under the working groups were eliminated
14 and replaced with more general statements of what FFT
15 wants in the forests?

16 A. I would have to see your proposal.

17 Q. That's fair enough.

18 Now, in the interrogatories we asked
19 whether or not the MNR has a silvicultural guide in
20 place for the mixedwood category and the
21 interrogatories said no, the MNR doesn't have one, but
22 one is under development.

23 Let me ask a couple of questions about
24 that. First of all, it is my understanding that a
25 large part of the undertaking currently falls into the

1 mixedwood category. Are you in a position to confirm
2 that?

3 A. A large part of the forest within the
4 area of the undertaking is often referred to as being
5 mixedwood.

6 Q. Can you tell me what percentage of
7 the undertaking falls into that category?

8 My understanding is that it is more than
9 50 per cent, but can you confirm or deny that?

10 A. I guess it depends on the exact
11 definition. In very general terms 40 to 50 per cent
12 would be a reasonable estimate.

13 Q. It is also my understanding that
14 there appears to be an increasing amount of the area of
15 the undertaking that's going into the mixedwood
16 category. Are you in a position to confirm that?

17 A. Could you say that again, please.

18 Q. It is my understanding that
19 increasing amounts of the area of the undertaking are
20 going into the mixedwood category. Do you know
21 anything about that?

22 A. In general terms it is my experience
23 that there is an increase in the mixedwood component of
24 our forest.

25 Q. Given that and given the fact that

1 the MNR does not have an approved silvicultural guide
2 for that component, when do you think the silvicultural
3 guide will be finalized and available for use by
4 foresters?

5 MR. KENNEDY: A. Perhaps I can assist
6 you in that regard, Mr. Lindgren.

7 You are well aware in our terms and
8 conditions we talk about revising silvicultural guides
9 within two years. Working with the group of
10 individuals working on that project I have directed
11 them to put their efforts towards the mixedwood guide
12 first and to look at the revision to the subsequent
13 guides as a second priority.

14 In that regard they are currently
15 assembling teams in which will be preparing various
16 sections of the mixedwood guide. I believe they have
17 had two meetings to date looking at grappling with a
18 project plan dealing with such things as what is a
19 mixedwood working group and is it better to look at
20 designing specific things for individual species that
21 are often in combination or is it better to go with an
22 actual mixedwood working group approach.

23 Their time horizon I believe was to
24 provide a draft plan for review certainly within the
25 next two years and to pick up on the revision to the

1 other guidelines during that period also.

2 Q. So when is it likely that we are
3 going to see an improved silvicultural guide for the
4 mixedwood category available for use?

5 A. I would estimate 18 to 20 months.

6 Q. Mr. Gordon, could I ask you to turn
7 to page 8 of Tab 3 of the witness statement.

8 Now, in the third paragraph the witness
9 statement indicates that:

10 "The FFT condition also provides for a
11 hundred hectare cut size limit..."

12 Let me stop right there. It is a
13 guideline not a limit,

14 "...and jack pine working group stands.

15 This prescription would result in a new
16 and unnatural mosaic of stands not only
17 due to the often smaller stand sizes
18 which would be created by the totally new
19 age class distribution created. "

20 Stopping right there. In MNR Reply No. 2
21 we heard evidence that 60 to 69 per cent of approved
22 clearcuts are under 130 hectares, and given that I am
23 wondering how can the MNR say that a hundred hectare
24 cuts will result in a new or unnatural mosaic when it
25 claims that most of the cuts already are in the 1- to

1 130 hectare range?

2 MR. GORDON: A. Well, first of all, 40
3 per cent of the cuts I guess are above 130; and
4 secondly, to be very candid with you, I don't think we
5 said that having 60 per cent of our cuts less than 130
6 is necessarily a natural mosaic.

7 Q. Well, that's an interesting comment,
8 Mr. Gordon. Are you saying that where the Ministry is
9 following the moose guidelines and producing cuts of
10 between 80 and 130 hectares that is not producing a
11 natural landscape?

12 A. Well, if you recall Mr. Ward's
13 evidence where he put evidence in front of the Board as
14 to our estimates of the natural disturbance size within
15 the forest, cutting the forest with cuts in the size of
16 80 to 130 hectares is different from the natural size
17 pattern.

18 Q. Well, my question is simply this, are
19 you saying that following the moose guidelines in fact
20 is resulting a new and unnatural mosaic of stands
21 within the landscape?

22 A. It is resulting in a different mosaic
23 on the landscape.

24 Q. Now, in the text paragraph on page 8
25 you are referring to the issue of cut size and moisture

1 regimes on site.

2 Let me ask you couple of general
3 questions about that issue. In general can we agree
4 that for a given site the size of the cut can affect
5 moisture conditions?

6 A. At the scale that we are carrying out
7 cuts in Ontario I don't think it is a factor at all.

8 Q. Is it your opinion, Mr. Gordon, that
9 larger clear cuts do not have a greater potential for
10 affecting the moisture regime than smaller cuts?

11 A. Again, within the size of clearcuts
12 that we are carrying out in Ontario I don't see it as a
13 relevant point.

14 There is no question that if you were to
15 carry out perhaps - and I am not an expert in this
16 area - very sophisticated measures you would detect and
17 perhaps there is an increase or decrease within the
18 moisture regime on various sites, but it would probably
19 be so minor that it is not relative in the practical
20 world to scale the management decisions that we are
21 making, and perhaps Mr. Armson who is a soil
22 scientist...

23 Q. Mr. Armson, I am sure you will get
24 the opportunity in reply.

25 I want to ask Mr. Gordon about cut size

1 and environmental impact. Mr. Gordon, is it your
2 evidence that larger clearcuts, large area clearcuts do
3 not have a greater potential for wind and water erosion
4 problems than smaller cuts?

5 MR. GREENWOOD: A. Mr. Lindgren, I led
6 this evience in Panel 10 so I will attempt to reply to
7 this as it wasn't a direct item.

8 It was my evidence at that time that the
9 clearcut effect, and it is still my evidence today, to
10 the best of my knowledge does not create the effect
11 that you are suggesting. The evidence that I was
12 presenting at that time was that the majority of effect
13 of the edge or with respect to changes in moisture
14 regime was within one tree length of the edge of a cut;
15 in other words, a shadow of the standing trees next to
16 the edge of the cut, but once you progressed into the
17 cut there was very little to no change.

18 Now, there has been some work with
19 respect to orientation, which way winds blow, et
20 cetera, how much vegetation is left on the cut
21 following harvest, what type of vegetation, what type
22 of site, and it is as a result of many of our weather
23 factors that there could be changes, but there is no
24 general, as I am aware, evidence that one can suggest
25 that as a clearcut gets larger that there is

1 differences in moisture regime.

2 Q. Mr. Greenwood, can you confirm for me
3 that factors such as moisture, erosion, nutrient
4 status, all of that affects or is related to site
5 productivity? There are other factors, but those
6 factors go to site productivity, correct?

7 A. I'm not sure I got them all. I got
8 erosion and moisture.

9 Q. I think I mentioned nutrient status.

10 A. Yes.

11 Q. Is it your evidence that in terms of
12 those factors that there is absolutely no difference
13 in Terms of large area clearcuts or very small cuts in
14 terms of the potential to cause runoff, microclimate
15 change, erosion and so forth?

16 There is absolutely no difference between
17 a large area clearcut and a small clearcut in terms of
18 the potential for those problems?

19 A. As I think I just indicated, there
20 are many other factors such as vegetation.

21 If I just take your example of slope and
22 if the two primary factors -- of erosion, and the two
23 primary factors of course which control erosion or
24 whether there is mineral soil exposed and whether there
25 is a slope or not and whether there is an action of

1 wind or water to move it.

2 Those by far are the primary factors
3 controlling erosion, not clearcut size.

4 Q. So if I put to you this proposition
5 that in general large area clearcuts have a greater
6 potential for adverse environmental impacts than
7 smaller cuts, that's a proposition that you cannot
8 agree with?

9 A. Well, your proposition just changed
10 rather dramatically. What you were talking about was
11 soil moisture and my evidence is that soil moisture
12 does not change with the size of clearcut.

13 Q. In fairness, Mr. Greenwood, my
14 question went far beyond soil moisture. I was also
15 talking about erosion and a few other factors.

16 So, again, I am putting the putting the
17 proposition to you, is it your evidence that large area
18 clearcuts do not have a greater potential for adverse
19 environmental impact than small cuts?

20 A. Again, I would need to know what
21 adverse environmental affects you were referring to.

22 The ones that you provided were
23 nutrients, erosion and soil moisture and in each one of
24 those I would suggest that is not the case. That is my
25 evidence. If you have others that you would like to

1 ask me about I would consider those.

2 Q. Well, Mr. Greenwood, I think we have
3 heard from Professor Benson on this very issue so I am
4 content to move on.

5 MR. LINDGREN: Madam Chair, what's the
6 Board intention in terms of a break in the morning?

7 MADAM CHAIR: Is this a convenient time
8 for the morning break, Mr. Lindgren, or did you want to
9 proceed for just a few more minutes?

10 MR. LINDGREN: This is a convenient time,
11 Madam Chair.

12 MADAM CHAIR: We will be back in 20
13 minutes.

14 ---Recess at 10:05 a.m.

15 ---On resuming at 10:25 a.m.

16 MADAM CHAIR: Mr. Lindgren.

17 MR. LINDGREN: Thank you, Madam Chair.

18 Q. Mr. Gordon, can I ask you to turn to
19 page 20 of Tab 3. On page 20 you or the people that
20 wrote this critique attempt to assess the impact on
21 diversity of the silvicultural guidelines proposed by
22 FFT.

23 If I can summarize the concern, it is
24 that FFT guidelines will lead to smaller cuts, high
25 edge and the juxtaposition of old and new stands. Is

1 that a fairly accurate summary of this page?

2 MR. GORDON: A. Yes, it is and as well
3 we are also concerned that if we were to follow the
4 direction that I think you are trying to push us that
5 on many sites there will be dramatic shift in the
6 species composition on that site and that may or may
7 not be appropriate depending on your objectives,
8 whether it be for wood supply or the maintenance of the
9 forest for habitat purposes.

10 Q. Well, would you be surprised, Mr.
11 Gordon, if I suggested to you that smaller cuts, high
12 edge, juxtaposition of old and new are directions that
13 are in fact currently required under your silvicultural
14 guides?

15 Let me give you an example. I understand
16 you have the silvicultural guide for white pine in
17 front of you, that's Exhibit 1601. Can you turn to
18 page 32 and 33 of that document.

19 A. Got it.

20 Q. Now, I am not going to go through
21 these or the other silvicultural guides in any
22 particular detail, Mr. Gordon, but if you look in the
23 far right-hand column of Table 4 where you see under
24 the heading Timber Management Strategies to
25 Maintain/Enhance Habitat we see, for example, under

1 deer foresters are expected to produce a mosaic of
2 small cuts and leave blocks; under moose, you want a
3 mosaic of sizes; under black bear you want cuts of a
4 high edge to area ratio for rough grouse, create small
5 openings.

6 For the record I am going to tell you you
7 will see similar direction in the spruce guide at pages
8 34 and 35 and the poplar guide at pages 26 and 27.

9 In light of these directions in your own
10 guides, Mr. Gordon, can you confirm for me that in fact
11 there is wildlife value associated with smaller cuts,
12 high edge and the juxtaposition of old and new cuts?

13 A. There is no question that there is a
14 wildlife value for such things depending on what
15 species you are looking at.

16 We provided an answer to one of your
17 interrogatories, I believe it was question No. 16 for
18 Panel, 5 where we have a discussion in writing on the
19 subject we are talking about right now. We end that
20 discussion on the second page of that answer by saying:

21 "Thus creating smaller openings through
22 timber harvest may be an appropriate or
23 inappropriate management strategy
24 depending on local conditions."

25 The other thing, I think we should have

1 an historical perspective. I realize the guidelines,
2 this one for example that we are looking at, was
3 written in '89, but a lot of things are coming together
4 relative to thinking relative to landscape management.

5 As far as I understand, when we were
6 writing those guidelines we were intending to look at
7 the specific species more on what I would call a local
8 basis and they weren't written within the context of
9 where we should be trying to go relative to managing
10 the landscape.

11 There is no question even moving in that
12 direction some of these recommendations will still be
13 appropriate. However, times do change.

14 Q. Yes, they do, Mr. Gordon.

15 Now, Mr. Kennedy, can I ask you to turn
16 back to page 33 of the main text of the witness
17 statement. In general terms I would like to explore
18 the issue of sustainable harvest levels and this is a
19 matter that you discussed briefly with Madam Chair this
20 morning.

21 Now, on page 33, item No. 4 there is an
22 indication that the problem with the overall system
23 described by Mr. Benson is that it is not appropriate
24 in the MNR's view for use in currently unregulated
25 forest where the age class structure does not approach

1 a normal forest.

2 I am not going to get into any wood
3 supply in technical detail, Mr. Kennedy, but I did
4 provide to you a copy of an article entitled Timber
5 Management, A Quantitative Approach by Jerome Clutter
6 et al.

7 Have you had an opportunity to review
8 that article?

9 A. Yes, I had an opportunity to review
10 it over night.

11 MR. LINDGREN: Madam Chair, I would like
12 to file that as the next exhibit.

13 What exhibit number is that, Madam Chair?

14 MADAM CHAIR: This will be 2307. Could
15 you describe it, Mr. Lindgren?

16 MR. LINDGREN: This is Chapter 9 from a
17 text entitled Timber Management, a Quantitative
18 Approach published in 1983 and it is authored by Jerome
19 Clutter et al.

20 ---EXHIBIT NO. 2307: Article entitled Timber
21 Management, A Quantitative
22 Approach by Jerome Clutter et al.

23 MR. LINDGREN: Q. Now, Mr. Kennedy, I
24 think I specifically directed you to read pages 254 to
25 265 and, again, without getting into any particular

1 detail, if you read those pages can you confirm for me
2 that the calculation of maximum sustainable harvest
3 does not depend on a fully normalized forest?

4 MR. KENNEDY: A. Just a moment, please.

5 Q. Well, perhaps I can assist you. If
6 you turn to page 263, Table 9.6, you will see an age
7 class structure of a hypothetical short rotation of
8 forests and realizing it is a hypothetical, would you
9 agree with me that does not depict a normal age class
10 distribution.

11 A. Yes, I will agree with you on that
12 point.

13 Q. On the more general point, can you
14 agree with me based on your reading and your
15 understanding of this article you can in fact calculate
16 the maximum sustainable harvest without having a normal
17 forest in place?

18 A. I agree with you that Mr. Clutter has
19 gone through the calculations after his initial
20 introduction in the beginning talking about the
21 difficulties that normal forests, of course, are not
22 found in real life and one must proceed to use concepts
23 that justify real forest conditions. I believe he
24 talks about that in the few pages of the study.

25 Q. On that issue, can I ask you to turn

1 to page 265 and towards the end of the first full
2 paragraph we see a statement to the effect that:

3 "This example well illustrates the
4 major problem facing managers of real
5 world forest. How is the forest best
6 managed to meet immediate demand
7 obligations and to simultaneously undergo
8 changes in structure that would prepare
9 for future circumstances. This is a far
10 more realistic and interesting problem
11 than the traditional forest regulation
12 problem of creating a fully regulated
13 forest."

14 Do you with agree with that statement?

15 A. I do agree with that statement and I
16 would say the sentence echoed there -- sorry, stated
17 there not surprisingly are the essence of our response
18 to the interrogatory from Forests for Tomorrow for MNR
19 Reply Panel No. 5 question No. 6. Those same points
20 are made.

21 Q. We will return to that question in a
22 moment. Reading further on page 265, the next
23 paragraph says:

24 "It should now be obvious that maximum
25 sustainably harvest is a statistic of

1 great practical importance for forest
2 enterprises. These mills are totally
3 dependent on wood from their own forests.
4 If such an enterprise ever places itself
5 in a situation where mill consumption
6 exceeds the maximum sustainable harvest
7 one of two events must subsequently
8 occur. One, mill consumption would have
9 to be reduced by closing some facilities;
10 two, the forest will be totally depleted
11 for most firms. Neither of these
12 outcomes would be considered a welcomed
13 development."

14 I take it you take no quarrel with that
15 general assessment?

16 A. The only quarrel I would take with
17 that is that the author has chosen to limit himself to
18 those two likely outcomes.

19 I think that there is a third that is
20 more probable and is implicit in the article in dealing
21 in a hypothetical and theoretical environment. He has
22 chosen to keep the variables constant.

23 I think that in more practical terms in
24 the real world that there would be other actions taken;
25 for instance, you will not continue to harvest at those

1 levels, you would not continue to proceed

2 You would instead take other management
3 options that are available to you, such as perhaps
4 reducing harvest levels, looking for volume from other
5 areas, perhaps taking a more active silvicultural
6 program, not necessarily in the case of planting or
7 seeding, ut you may choose to carry out such techniques
8 as precommercial thinning so as to increase volume
9 growth and some of these stands would already be
10 available in order to offset shortages in future and
11 other matters of that nature.

12 So I think there another option that has
13 been unstated here is a more realistic one. However, I
14 would agree with the author that in the event that
15 those practical considerations were not done and one
16 was to continue to blindly harvest in the manner that
17 this article suggests, for sake of example, in all
18 likelihood one of those two events would occur.

19 Q. Thank you. The measures that you
20 have just mentioned; namely, thinning and regeneration
21 techniques, those are things that you would undertake
22 to ensure that harvesting doesn't exceed the maximum
23 sustainable harvest?

24 Those are things that you do to avoid the
25 consequences of exceeding maximum sustainable harvest.

1 I think you just indicated you do that so you don't
2 have to shut down mills.

3 A. I don't think I would characterize it
4 quite the way you have. I would say those are
5 management techniques that are employed to ensure a
6 continuous and predictable wood supply to the best of
7 the manager's ability while dealing in the real world
8 with uneven age structure and sale demands present in
9 the forest.

10 MADAM CHAIR: Excuse me. Mr. Kennedy, we
11 have the evidence before us of Mr. Boswell and the
12 Espanola situation where I think he addressed this
13 point.

14 I think it was raised by Forests for
15 Tomorrow that within some period of time, and I think
16 it was 50 years, they were facing a problem because
17 they would have harvested much of their old age class
18 forest and the new forest would not have grown fast
19 enough for them and he gave us an array of
20 possibilities of things that they are doing to
21 accommodate that lack of fiber in their area; bringing
22 it in from the outside and getting better recovery from
23 their process and so forth.

24 Do see that option as not being present
25 by the author of this article?

1 MR. KENNEDY: Yes, Madam Chair, I am
2 familiar with the response given by Mr. Boswell and as
3 a real life experience example with the types of items
4 that I was talking about, that there are other
5 management techniques available that are employed today
6 to assist in situations where there is potential for a
7 definite wood supply and I see those type of management
8 options that are available to us not reflected in that
9 article.

10 MR. LINDGREN: Q. Finally, Mr. Kennedy,
11 the next paragraph states that:

12 "It should also be noted that maximum
13 sustainable harvest is bound to become a
14 significant statistic in management of
15 the national forest of the United States
16 since the National Forest Management Act
17 of 1976 requires that with certain
18 limited exceptions the annual cut from
19 each national forest must not be greater
20 than the maximum sustainable harvest."

21 Can you agree with me that this paragraph
22 seems to indicate that the U.S. Forest Service is, in
23 fact, calculating maximum sustainable harvest in the
24 non-normal forest context?

25 MR. KENNEDY: A. I believe the article

1 correctly states 'is bound to become a significant
2 statistic' and I believe that what is in use now and we
3 are experiencing various levels of success in taking
4 that concept and putting it into place, yes.

5 Q. Then finally, Mr. Kennedy, before we
6 leave this article, can I ask to you turn to page 254.
7 Do you have 254?

8 A. Yes, I do. If I could just add to
9 that response, I am just thinking of another point, is
10 that of course in the United States by and large most
11 mills are not as heavily dependent upon the national
12 forest for the level of supply to individual an mill
13 which is different than the case in Ontario.

14 Q. Now, at page 254 the authors offer a
15 definition of maximum sustainable harvest and they
16 indicate:

17 "A problem of considerable and
18 practical significance involves
19 determination of the maximum continuing
20 constant harvest level that can be
21 imposed on a given forest and sustained
22 in perpetuity. This level is referred to
23 as the maximum sustainable harvest or
24 maximum sustained yield."

25 Stopping right there. Do you have any

1 difficulty with those definitions of maximum
2 sustainable harvest?

3 A. Actually I do. In fact, I had
4 wondered if there is inconsistency in the article and I
5 make the note that the problem that I point out here is
6 a similar one that we've had in interpreting evidence
7 that has been put before the Board and that is, on this
8 page, 254, under item 9.3, I understand the author to
9 be saying that the level that can be imposed in a given
10 forest and sustained in perpetuity implies to me that
11 there is a single line shown, that a given level must
12 be sustained forever and ever.

13 You will find later in the article when
14 we talks about the needs to recalculate and indeed that
15 the level will fluctuate, I find that realization very
16 similar to the comments made by MNR not only in your
17 definition of the undertaking in terms of the
18 predictable supply and continuous, but also the
19 comments raised by Dr. Osborn back in Panel 3 and 4
20 where, indeed, confronted with the real world forest
21 that the level will fluctuate and I find that in
22 contradiction to the statement here about sustaining a
23 particular level in perpetuity. So I am left in a bit
24 of a quandary.

25 Q. Speaking of quandries, let's turn to

1 your answer to FFT question No. 6 to Reply Panel No. 5
2 and this is found in Exhibit 2260 and this is the
3 question that you referred to a few moments ago.

4 The answer refers to both maximum
5 sustainable harvest and long-term sustained yield or
6 LTSY and in the body of the answer it goes on to
7 suggest that LTSY can't do a number of things, such as
8 account for current and future structure of the forest,
9 it assumes a normal age class and so forth. You are
10 talking about Professor Benson's model here.

11 Am I correct in understanding that the
12 MNR has not reviewed Professor Benson's model?

13 A. Yes, I believe that is correct. We
14 do not possess a copy that I'm aware of and have not
15 reviewed his model.

16 Q. Isn't it generally true that for any
17 model you can basically factor in these kinds of
18 variables to get that kind of output?

19 A. If I understand your comment to mean
20 is it true that in constructing a model you can build
21 in variables or calculations so as to contribute to the
22 final outcome of the model, yes, that's true.

23 Q. So it is possible to build in
24 considerations such as age class structure, renewal and
25 success and all the rest of it into a yield model?

1 A. I would say that in the manner that
2 the MAD calculation model has been constructed in the
3 late 70s and further refined and made more usable by
4 today's managers, that those very factors have been
5 built into that model and are reflected in the Timber
6 Management Planning Manual where the MAD criteria are
7 spelled out -- or laid out, sorry, in the timber
8 management plan along with the actual age class
9 distribution of the forest and the supporting volume
10 information from the FR.

11 I believe that's a good example to say to
12 you, yes, it is quite possible to construct models to
13 take into account those factors.

14 Q. I take it that you have reviewed
15 Professor Benson's evidence in FFT Panel 5?

16 A. On that point I must admit that the
17 review that I have done has been a very cursory one
18 that I was able to conduct yesterday approach the noon
19 hour and late last night.

20 Q. I am not to to cross-examine you in
21 detail on that evidence, but you might recall that
22 Professor Benson did calculate LTSY for the Domtar
23 unit.

24 Can you agree with me that suggests you
25 can in fact use LTSY in the non-normal forest

1 situation?

2 A. I'm aware that he has used his model
3 to model a number of forests. I am unable to speak at
4 the moment to the types of criteria factors that he
5 used.

6 So I acknowledge the fact that Mr. Benson
7 has run a particular model using at least some existing
8 information that would be used in the MAD calculation.

9 Q. Okay, thank you. Professor Armson,
10 you made a number of comments about full-tree logging
11 and yesterday Madam Chair asked you pointblank if you
12 had a concern about full-tree logging and, if not, why
13 undertake the long-term study. My notes indicate that
14 you said you did have a concern and that the study
15 should be undertaken.

16 I am still not entirely clear on what
17 your position is. Can you, please, explain to me as
18 concisely as possible what is the nature your concern
19 about full-tree logging in Ontario?

20 MR. ARMSON: A. Well, the word concern
21 is a very clear one in the English language.

22 There are many parties and individuals
23 who have expressed very strong views on the negative
24 impact of full-tree harvesting.

25 As one who believes one should look at

1 the existing evidence, and I went into some detail as
2 to what direct or inferential evidence existed, I
3 therefore as a professional forester have a very strong
4 concern that views or decisions based on what I would
5 consider to be erroneous or views developed based on
6 minimal or little real evidence -- my concern is that
7 those views should be dealt with or debated in an arena
8 such as this one. That is my concern.

9 Q. Now, again, if I understand your
10 answer correctly, other parties have concerns about
11 full-tree logging. It is not a concern that you
12 directly have because you don't think there is any
13 direct or inferential evidence that supports a
14 restriction on full-tree logging in Ontario, and let me
15 stop right there.

16 Is that an accurate description of your
17 position?

18 A. Madam Chair, I have a concern as a
19 professional forester about the activities, forestry
20 activity that deal with forest management.

21 That having been said, then if there is a
22 position being taken or what is a major one that can
23 impact on professional forestry practices, then I
24 automatically have a concern. I would expect every
25 professional forester to have a concern to a varying

1 degree on these matters.

2 Q. If in your view there is no direct or
3 inferential evidence that supports limitation of
4 full-tree logging as has been proposed by some of the
5 parties, then why is the Ministry proposing to develop
6 interim measures or so-called good practice
7 recommendations on full-tree logging?

8 A. If the matter and the issue is one in
9 the public arena, is in dispute -- for two reasons.

10 One, that in order to derive scientific
11 evidence, direct evidence, there is only way to do it
12 and that is through the nature of experimentation
13 carried out properly, as discussed and described by Mr.
14 Greenwood.

15 I also know that in undertaking that, and
16 this was addressed by Mr. Greenwood, the simple
17 question of, does full-tree harvesting and what we
18 would call the null hypothesis reduce future site
19 productivity, that in addressing that from a scientific
20 standpoint it brings into question other factors, and
21 Mr. Greenwood dealt with that when, Madam Chair, you
22 asked the question about why spend "x" number of
23 dollars on such a study.

24 As both a professional and a scientist I
25 believe, if you like, the vehicle of the study can

1 produce scientific information which will be extremely
2 valuable in the short, medium and long-term independent
3 of the fact that the study was initially triggered off
4 or set up to answer one specific question.

5 Science is replete with examples of
6 studies that were set up to answer a very specific
7 question, but by the nature of the study they in fact
8 provided very valuable information. That's the nature
9 of science.

10 So I believe that the study, while set up
11 to answer one specific question, in fact a very
12 valuable contribution will be made because it has been
13 set up scientifically and will provide a host of other
14 valuable information over time.

15 Q. Well, I hate to harp on this, but I
16 am going to ask you one more time and move on. We have
17 heard your view that you don't think there is any
18 direct or inferential evidence to support a limitation
19 of full-tree logging, but you are more than happy to
20 have a study undertaken of the issue.

21 Let me ask you pointblank, in your
22 opinion, in your personal view are there sites in
23 Ontario that from a nutrient standpoint or a site
24 productivity standpoint that are sensitive to or may be
25 adversely influenced by full-tree logging?

1 A. The answer to your question, Mr.
2 Lindgren, I believe I answered some time ago, I believe
3 in cross in relation to Panel 9.

4 My objection to the existing one is that
5 there be a rule that a certain type of harvesting
6 system be invalid on the basis of a measure of site
7 which I believe has no relationship to nutrient supply
8 and that was soil depth. That was a rule and a need
9 which was applied.

10 To continue the answer, I personally and
11 professionally believe that there are sites - not site
12 types, sites - in Ontario where the management forester
13 may as a result of his book of knowledge and his
14 experience and the nature of the conditions may decide
15 in his prescription not to have full-tree harvesting.

16 I have no doubt that if I were a
17 management forester in certain areas I might come to
18 that conclusion on certain sites in writing a
19 prescription.

20 Is that a fair answer? But that does not
21 mean there should be a rule.

22 Q. Okay. Now I think we are getting
23 somewhere, at least from my client's perspective.

24 When you say that an individual forester
25 might in his personal experience or familiarity with

1 his unit might decide that certain types -- sorry,
2 certain sites should not be full-tree logged, what kind
3 of sites are you thinking of?

4 What are the parameters of a site
5 description that would lead them to be sensitive to
6 full-tree logging?

7 A. You are asking me to set up a
8 category of types. There are any number of different
9 properties, if you will, that might exist.

10 I will give you an example of one and in
11 giving this example the last thing I want to be
12 concluded is that it is representative of a type.

13 It is conceivable to me that on an area
14 of extremely coarse textured soils as a result of the
15 history of the area, and the history of the area in my
16 opinion would not include previous full-tree
17 harvesting, but as a result of the history there was
18 virtually no organic matter content to the soil at
19 all -- in fact it would be a situation that I describe
20 as very, very close to the wastelands of southern
21 Ontario, parts of Thessalon on which soils,
22 incidentally, for certain species have very high
23 productivity.

24 I can conceive that in a given situation
25 a forester might assess that using just in that case

1 those two and decide that he would not under those
2 conditions go for full-tree harvesting of the existing
3 stand. In other words, there was virtually no organic
4 matter in the soil or in the surface.

5 This, I may say, is almost an unusual and
6 exceptional situation, but those two conditions would
7 be the one that I would look at, but I his hasten to
8 add they are not the only factors.

9 Q. Now, if I understand you correctly
10 you have just told us that it is conceivable that
11 certain sites that has no organic material might be an
12 inappropriate candidate for full-tree logging; is that
13 correct?

14 A. It might be in the judgment of the
15 forester who was there.

16 Q. And are there other sites that you
17 would conceive of as being inappropriate or perhaps
18 being inapprorprate for full-tree logging?

19 A. I'm thinking more of factors rather
20 than sites. You are asking for sites.

21 The problem is, when you ask for a
22 description of a site it has to have a context. I am
23 not trying to evade the question, but I really -- I
24 have given you two attributes. I think beyond that I
25 couldn't go.

1 Q. So if I were to ask you, and I am not
2 going to, but if I theoretically were to ask you to
3 define sites that might be sensitive to full-tree
4 logging you would look at presence or absence of
5 organic matter or material and you would also look at
6 whether or not it is coarse textured soil?

7 Are those the two practices that you were
8 referring to?

9 A. You asked me for an example and those
10 are the two factors that I would look at firstly.
11 Beyond that, there are other factors that conceivably
12 could come into play, but those are an example of two
13 factors.

14 Q. That's my next question. What are
15 the other factors or parameters that you would look
16 for?

17 A. The nature, topographically, of the
18 condition in relation to drainage, where you have a
19 water flow laterally through a site, and I can think of
20 two examples of that.

21 One has been described in the FEC system
22 for the Clay Belt, Madam Chair, and I think I described
23 that where on the very fine textured soils and gentle
24 slopes there is a lateral movement through the --
25 particularly on the surface of the clay and the soils

1 are of oxygenated and nutrient rich material. That was
2 pointed out in the FEC system. There is a very high
3 nutrient situation.

4 So if you have that, even on a fine
5 textured soil with what would be considered a high
6 water table or if have you that -- in the second
7 example, on a very coarse textured material. We have
8 in northern Ontario particularly we have soils which
9 are almost comprised completely of large pebbles or
10 stones and these in many instances are associated with
11 a lateral flow of water from the standpoint of texture,
12 but they are about as coarse as you can get, but from
13 the standpoint of the water movement I refer to them as
14 -almost natural hydroponics and these are extremely
15 productive sites and I have even visited them myself.

16 So the texture in itself is one. Another
17 attribute is the movement or lack of water through a
18 site. So those are the kinds of things that the
19 forester on the ground would be able to observe. As I
20 say, there is no one factor that in itself serves to
21 distinguish an infertile from an fertile soil.

22 MR. GREENWOOD: A. Mr. Lindgren, as a
23 forester who has spent many years in the field, it is
24 unfortunate when we get into these discussions that we
25 generally talking about worst-case scenarios.

1 The scenario that I would like to present
2 if I was still on my unit where I might not want to use
3 full-tree harvesting doesn't have to do with the
4 reduction in long-term productivity, which tends to be
5 the focus of this discussion.

6 There are naturally low fertility sites
7 where growth is slow and it may be my choice as a field
8 forester where I can improve that growth rate by
9 leaving extra organic matter on the site.

10 In a case such as that that may be my
11 decision, if I was influencing harvesting operations to
12 attempt to agrade the site through not using the
13 full-tree harvesting method.

14 I would also make one comment. I had
15 hoped that I had clarified yesterday why we were doing
16 the study. By the Board's question to Mr. Armson, I
17 had intended to use it as a longer introduction to my
18 presentation, but it is the Ministry's position that
19 there is still debate in the research community in this
20 subject area and, as Mr. Abraham and myself both have
21 stated now, this is not uncommon, but it does raise the
22 question, once that knowledge is being debated what do
23 we do.

24 In this particular case what do we do
25 right now, Mr. Armson explained that you, first of all,

1 look at your direct and your inferential evidence and
2 you determine the risk that's associated with it.

3 Upon doing that, in this particular case
4 the risk was determined to be low in terms of reduction
5 of long-term productivity. Scientific studies carried
6 out in Ontario showed that if rotation ages are longer
7 than 30 years that there is not generally a risk on the
8 studies that were on the sites that were sampled.

9 However, there is still a debate that all
10 sites have not been sampled. So in terms of the answer
11 of what do we do right now, as we presented yesterday,
12 we leave the decision to the foresters, but as well as
13 that we ensure that they have the best information and
14 expertise in front of them. Hence, the best practices
15 component of the study that I presented yesterday.

16 So the awareness has been raised and we
17 attempt to put the best information, but it is also the
18 Ministry's opinion that the debate is still there. The
19 evidence is incomplete and that given the level of
20 concern it is worth attempting to complete that
21 evidence. That's the purpose of the study.

22 Now, that is also in recognition that it
23 is a long-term expensive study and that there is more
24 that will come out of this question. By answering this
25 question we virtually have to understand how those

1 nutrient cycles work on a particular site combination.
2 That is valuable information. It is necessary to
3 answer this question, but it will also allow us to
4 answer many other questions.

5 So I think that is what I tried to
6 explain yesterday and I apologize if I didn't make that
7 clear.

8 Q. Mr. Greenwood, firstly, arising out
9 of your statement, you have said a unit forester might
10 think twice about full-tree logging in a site that has
11 normally low fertility and I thought I heard Professor
12 Armson say yesterday that the MNR does not go out and
13 collect, you know, quantitative hard data on the
14 nutrient status of sites that have full-tree logging or
15 that might be full-tree logged. Is that the case?

16 A. I think what Mr. Armson was referring
17 to were the scientific methods that are used to
18 quantify nutrient components, and that's correct.

19 He just gave you one aspect that would be
20 an attribute that we would look for that we know
21 reflects growth rate and that would be soil texture.

22 It is a surrogate. It is not a direct
23 measure, but when I was referring to low growth rate,
24 again I go back to the experience when I was on my
25 unit, one can't help when you manage a unit over a

1 period of time to recognize differences in growth rates
2 in trees and certainly that is the ultimate measure.

3 When I was referring to a site, in fact I
4 wasn't picturing the soils, I was picturing the trees
5 in my head that were very small and it was the size of
6 the trees that I was picturing.

7 That's one of the better indicators of
8 growth rate, although the danger of course is that it
9 is a combination of growth rate and site and it may be
10 that the growth rate is only for that species and you
11 can in fact increase the growth rate simply by changing
12 species.

13 Q. You have also indicated that MNR
14 conduct some sort of risk analysis in determining
15 whether or not I guess full-tree logging should go
16 ahead pending the completion of the study and I think
17 yesterday you used the word risk assessment.

18 Now, to me that is a term that carries
19 with it certain baggage. I am going to ask you, when
20 you say risk assessment, did the MNR conducted a formal
21 emperical study that identified the risk, analysed the
22 risk and quantified the risk in going ahead with
23 full-tree logging pending the completion of the study
24 and, if so, where is this risk assessment?

25 A. The answer to your question is no and

1 I think my words yesterday were that we assessed the
2 risk. It was not a risk assessment in the terminology
3 that you are describing it.

4 It was simply the provincial forester,
5 various scientific and practical staff sat down and
6 reviewed the literature in the situation, they also
7 communicated and confirmed with the research community
8 what they were attempting to put into their
9 documentation and it was through that process that the
10 risk was assessed as well.

11 Q. Professor Armson, yesterday and again
12 today you have referred to the example of farm and
13 agricultural lands in southern Ontario and you have
14 also mentioned that red pine was growing on these
15 areas.

16 Are we supposed to take it or we supposed
17 to infer that because red pine is growing that the
18 previous harvesting practices had no impact whatsoever
19 on the site productivity?

20 MR. ARMSON: A. No. In fact, I didn't
21 restrict my descriptions to southern Ontario. I did
22 include specifically the area in central Ontario.

23 No, we cannot conclude that the previous
24 agricultural practices did not have an effect. In
25 certain instances in terms of other species that were

1 planted they had a very profound effect.

2 In terms of red pine, one might even put
3 up the hypothesis that it had a positive effect because
4 some of the productivity was very high, but there are
5 other factors involved there in terms of the growth of
6 red pine related to the nature of those soils not only
7 the nature of the upper part of the soils, but lower
8 part of the soils in terms of red pine.

9 It is, again, another matter which other
10 factors are involved, but to answer your question very
11 directly, in terms of red pine the nature of the
12 farming that preceded it for the most part did not seem
13 to have a major effect and for other species it did.

14 Q. Well, that's my point. The mere fact
15 that red pine is now growing on the field doesn't mean
16 there hasn't been a loss of productivity, does it?

17 A. The example was merely that for
18 certain species productivity on soils which were in the
19 coarser textured class had low organic matter and,
20 therefore, by inference very low fertility and also low
21 fertility in terms of agriculture that high
22 productivity in one or more species could be obtained.
23 Actually, red and white pain.

24 This is not to say that there were
25 similar areas where other species had varying degrees

1 of productivity. The point was merely to illustrate
2 that high productivity can be obtained by certain
3 species on soils which have very extreme properties in
4 terms of texture and in terms of soil fertility.

5 Q. Well, without belabouring the point
6 let me come at it this way. Would you agree with me
7 that to determine if there has been a loss of
8 productivity on these fields or in any context you
9 would have to know what the previous level of
10 productivity was, correct?

11 A. That is correct, and all we have are
12 written accounts by settlers in those areas and I
13 believe certain of the records, and I am not familiar
14 with them directly, there would be some logging records
15 that may or may not have survived. I'm not aware of
16 any specific examples.

17 MR. GREENWOOD: A. There was a second
18 point that I think Mr. Armson was attempting to make
19 when he brought up that example and it was a point that
20 it is very difficult to equate static measurements of
21 nutrient pools with productivity of a tree.

22 One of the examples when he brought up
23 that farming scenario was that if one had gone on and
24 made the type of measurements that we tend to do in
25 these experiments where we look at the amount of

1 biomass left on site, where we look at the amount of
2 organic matter left on site they would have found
3 extremely low values. However, we currently have red
4 pine growing at site class one on those sites.

5 So I the second point was that it is very
6 difficult to make the transition from those nutrient
7 measurements to the actual productivity of the tree and
8 he spent some time explaining the Mahandrappa paper
9 where that caution was also very explicitly recognized,
10 that when we make those measurements there is a big
11 jump to translating those measurements to the way the
12 trees utilize those nutrients and, therefore, their
13 productivity.

14 - Q. Let's turn to some of that evidence,
15 Professor Armson. You have attempted to respond to the
16 MOE evidence on full-tree logging and I presume that
17 you know that FFT also called evidence on that issue,
18 Professor Hutchinson spoke to it, Mr. Maser, Mr. Marek
19 and we also filed some of the literature that you have
20 discussed.

21 Can we agree that in your reply evidence
22 yesterday and today you have not filed a single
23 scientific paper which either refutes those papers or
24 supports your position that full-tree logging is not a
25 concern in Ontario?

1 MR. ARMSON: A. When you refer to the
2 refutation of papers, I believe I refuted the papers
3 that were cited; Mr. Maliondo's paper, the paper by
4 Timmer, Savinski and Marek which were the prime sources
5 of information.

6 I'm not familiar with the papers that
7 were cited by Mr. Maser at all, but for the papers
8 cited by Dr. Hutchinson and referred to by Mr. Neary,
9 the two key ones were the ones, as I say, from Maliondo
10 which was a review, a purported review and the one by
11 Timmer, Savinski and Marek.

12 I pointed out that in evaluating a
13 scientific paper there were a number of cautions - and
14 I use the word as used by Mahandrappa et al - in
15 viewing the data and drawing from that data certain
16 conclusions. That is what I referred to. So I was
17 indeed citing some evidence from papers, but as far as
18 Mr. Maser goes I can't respond to that one.

19 Q. Well, my question was simply this, we
20 have heard your critique some of the articles and
21 literature that other parties have filed.

22 My question to you is quite simple, you
23 haven't filed a single scientific paper yesterday or
24 today or the day before that supports your critique or
25 your position.

1 A. I believe there are other papers
2 filed by the Ministry in Panel 10, for example, Weetman
3 and Webber comes to mind where a number of scientific
4 papers, Foster and Morrison believe was another one
5 referred to by Mr. Greenwood, those papers were filed.

6 I was dealing with the evidence as
7 presented by Dr. Hutchinson and Mr. Neary on the basis
8 of that evidence. That is what I was dealing with.

9 Q. My question didn't ask you what you
10 filed two or three years ago. I am saying to you, you
11 didn't file a single paper in this evidence, in this
12 reply evidence to respond to the papers filed by the
13 other parties. That's a simple yes or no. You didn't
14 do, did you?

15 A. I was unaware that the simple act of
16 filing papers was the purpose of this exercise.

17 MR. GREENWOOD: A. As well, Mr.
18 Lindgren, I am a little bit confused because it was my
19 understanding that the evidence that we filed in Panel
20 10 was evidence that stood before the Board and the
21 reply is just that, it was reply to evidence that was
22 presented since then.

23 That doesn't change the evidence that we
24 put in in Panel 10 and, in fact, that being my evidence
25 I know it certainly hasn't changed any of my evidence

1 or my scientific interpretations of those papers which
2 I presented in that rather lengthy evidence.

3 Mr. Armson has mentioned a number of the
4 authors. I presented the authors that did work in
5 Ontario, I mentioned that Foster and Morrison in their
6 papers had found that there was not a potential loss in
7 productivity as long as your rotation ages were kept at
8 the standard rotation ages we use now.

9 I presented that evidence in some detail,
10 I was cross-examined on that evidence and I think it
11 still stands. I would think it would be a waste of the
12 Board's time perhaps in this reply evidence to go back
13 all through that.

14 Q. Well, far be it for me to get into
15 final argument right now, but I am going to suggest to
16 you that if there was an opportunity for you to file
17 another piece of paper you would have and the fact that
18 you couldn't find one I think speaks volumes.

19 Now, Professor Armson, and I guess this
20 goes to Mr. Greenwood as well, you discussed these
21 interim measures that the MNR is preparing to develop
22 pending the completion of the full term of the
23 full-tree logging study and I am a little bit curious
24 as to the shape and the content of these guidelines.

25 I presume you don't have any in mind

1 right now that you might put in place?

2 A. No. In fact, what I presented
3 yesterday was the procedure and approach to be used to
4 develop those and I think I also indicated that that
5 project was not underway yet. It is expected to take
6 place over the coming winter.

7 Q. When these so-called good practice
8 recommendations are actually available, are they going
9 to be mandatory or binding upon the foresters or
10 planning teams?

11 A. That certainly is not the intent. I
12 am not sure what you mean by binding in that they are
13 further guidelines and expertise to be put in front of
14 the forester when they are making that decision in the
15 field.

16 I guess we would expect all professionals
17 to take that type of information into account as we
18 expect them to take into account the silvicultural
19 guidelines.

20 Q. So if I understand it correctly the
21 good practice recommendations will be out there and you
22 are hoping that foresters will read them and perhaps
23 incorporate them into silvicultural ground rules?

24 MR. KENNEDY: A. If I might take that
25 one, Mr. Lindgren. The guidelines would be -- the work

1 that Mr. Greenwood is referring to we do intend to
2 incorporate into the environmental guideline that we
3 discussed in Panel 3.

4 That environmental guideline is intended
5 to be yet another guideline in our series of
6 implementation manuals and you will recall in our terms
7 and conditions we now require a listing of
8 implementation manuals that are used in preparation of
9 each and every plan and we also require that the
10 district manager certify that in fact those manuals
11 have been consulted during the preparation.

12 I think in that sense I would say to you
13 that consulting those guidelines and determining how
14 they comply to the particular management unit under
15 planning I would consider to be a mandatory
16 requirement.

17 Q. Now, yesterday, Professor Armson, I
18 gave you an excerpt from the FMA review pertaining to
19 the Trout Lake Forest. It is a four-page excerpt.
20 Have you had an opportunity to read that?

21 MR. ARMSON: A. Yes, I have.

22 MR. LINDGREN: Madam Chair, I would like
23 to file that as the next exhibit.

24 Madam Chair, I take it that is exhibit
25 2308 and I will describe it as a four-page excerpt from

1 the FMA five-year review for the period 1984 to 1989
2 and it is the portion of the FMA review dealing with
3 the Trout Lake Forest.

4 ---EXHIBIT NO. 2308: A four-page excerpt from the FMA
5 five-year review for the period
6 1984 to 1989 re the FMA review
7 dealing with the Trout Lake
8 Forest.

9 MR. LINDGREN: Q. Professor Armson, can
10 I direct you to the bottom of page 102 in this package
11 and there we find the paragraph which indicates that
12 the committee was impressed with the silvicultural
13 practices of the company, but the review team goes on
14 to write:

15 "However, the company is in the process
16 of changing from a tree length cut and
17 skid system to a full-tree system. This
18 change may adversely affect regeneration
19 of the jack pine working group as much as
20 the seed sources removed from the site.
21 While the company is presently monitoring
22 the effects of full-tree harvesting of
23 jack pine stands the following is
24 recommend..."

25 If you turn now to page 103, their
recommending is that:

1 "The company when using the full-tree
2 logging method to harvest jack pine
3 stands takes steps to ensure that tree
4 cones are distributed across the cut-over
5 area for the purposes of natural
6 seeding."

7 Now, Professor Armson, I take it that you
8 are probably not familiar with the particular sites
9 they are talking about, but in general is that a good
10 practice recommendation where there is a concern about
11 natural regeneration?

12 MR. ARMSON: A. First of all, I am
13 familiar with the Trout Lake Forest, I have been on it,
14 so generally I appreciate the conditions they are
15 talking about.

16 To answer your question, I believe that
17 the recommendation is in fact one silvicultural option
18 and not the only option that might be employed.

19 Q. I am not asking you if there are
20 other options, but I am asking you if there is a
21 concern about seed source and if there is a concern
22 about the ability to regenerate jack pine this is
23 probably not a bad idea, is it?

24 A. That's correct, it is one of the
25 things that might be done.

1 Q. And, Mr. Kennedy, is this sort of
2 direction the kind of thing we might see in the
3 environmental guidelines at some point?

4 MR. KENNEDY: A. That kind of direction
5 currently exists in the jack pine silvicultural guide
6 where in northwestern Ontario scarification and leaving
7 cones on site has proven to be a technique that is
8 successful in some areas. It was not proven to be as
9 successful in other parts of the province.

10 As far as whether that will be in the
11 environmental guidelines as good practices and the
12 review that Mr. Greenwood has spoken about, I don't
13 think I would hazard a guess at this point.

14 We asked Mr. Morris on behalf of the
15 Ministry to put together to that group to look at the
16 best practices in conjunction with people from the
17 federal government, as Mr. Greenwood outlined, and I
18 wouldn't second guess the results that will come up.

19 Q. Mr. Greenwood, can I ask you about
20 the full-tree logging study. As I understand it you
21 have got a small number of sample plots across the
22 north and northwest and you are going to study them for
23 up to 20 years providing that the funding is available
24 and I guess at the end of the 20-year period are you
25 going to have to extrapolate the results from those

1 studies in order to reach some meaningful conclusions?

2 A. I think I mentioned yesterday that as
3 far as research studies goes this was not a small
4 number of plots. This was an extremely number of
5 plots.

6 The reason that it is an extreme number
7 of plots, and the one I showed yesterday again were
8 simply the black spruce ones, there was an equivalent
9 for jack pine was to cover the range of important and
10 common sites where black spruce would be managed.

11 So there will have to be some
12 extrapolation of information from the intensive sites
13 to the satellite site plot locations which will be
14 necessary in any research project, but the intent of
15 the study is to cover the range of sites that one could
16 normally manage spruce and jack pine on, in fact maybe
17 a bit beyond that, but certainly the important sites of
18 concern.

19 Q. I take it the intent of the study is
20 to produce results that are not site specific, but
21 might have general application or at least have some
22 meaning or import for other areas across the area of
23 the undertaking?

24 A. Results are site specific, because
25 the data obviously will be located on specific sites,

1 but however covers enough sites that it will have
2 general application.

3 Q. Finally on that particular question,
4 he have heard in this hearing about the dramatic
5 increase in the use of full-tree logging and in recent
6 years we have heard about the dramatic increase or
7 apparent increase in full-tree chipping and given that
8 rate of change in harvesting technologies and
9 techniques we are wondering what will the value of the
10 study be in 20 years based on current practices?

11 A. It is a very good question, certainly
12 one that concern the researchers.

13 I didn't explain yesterday because I
14 didn't want to get into that level of detail that the
15 type of study that is being undertaken is called a
16 process study. The things that the researchers are
17 examining and measuring are the processes that are
18 taking place on those sites. That would be distinct
19 from simply taking emperical measurements and static
20 measurements on the site.

21 The reason that you would make this a
22 process study is that once you understand those
23 processes you can then utilize that information to
24 determine potential effects from other changes going on
25 on that site.

1 So when I stated a few minutes ago that
2 this particular study will give much useful information
3 beyond the full-tree harvesting question but was
4 necessary to answer the full-tree harvesting question,
5 that's really what I was referring to.

6 To answer that question they have to
7 understand the processes taking place on those sites.
8 Of course, once you have that understanding you can
9 then deal with many other issues and concerns.

10 Q. Well, how is the study going to take
11 into account or compensate for the fact that harvesting
12 technology can and probably will change dramatically by
13 the time the study is complete?

14 A. It is the same answer, Mr. Lindgren,
15 by understanding the underlying processes as opposed to
16 just tying it to static measurements related to that
17 one treatment you can then evaluate the potential
18 effects of other treatments as well.

19 Now, the other thing that they have done
20 in treatments of the sites is attempted to cover a
21 broad range, for instance, in this case biomass
22 removal, certainly broader than the current harvesting
23 practices would entail. In that sense we are covering
24 I think a wider bracket of potential practices.

25 Certainly I don't think we envisage any

1 harvest practices that would remove all organic
2 material from the site and yet that is one of the
3 treatments in this experiment.

4 Q. Let me shift over to the long-term
5 growth and yield study that you have discussed. I
6 guess one of the things you are trying do there is
7 co-relate increased in growth and yield to treatment
8 type. Is that a fair assessment?

9 A. One of the needs that was identified
10 by the participants was an ability to relate growth or
11 yield to particular treatment types.

12 That caused some difficulty for those
13 designing the methodology because there is a host of
14 variables involved, including species site and all of
15 the various treatments.

16 It is one of the reasons why I indicated
17 on the slide that that would form part of the enhance
18 program. It was the decision of the participants that
19 that type of information would probably have to be
20 collected through specific studies, but we would hope
21 to have those specific studies related to the core and
22 growth and yield program so that, again, it could be
23 extrapolated.

24 Q. When will the enhanced program and
25 the core study be complete and the information

1 available?

2 A. Similar to the long-term productivity
3 study, information obviously will be flowing from that
4 as soon as we start measure. I can't give you a
5 definitive answer.

6 Plots are going into the ground right
7 now. At the current time there are not in this sort of
8 start-up year any specific experiments to look at
9 treatment types. However, plots are going into stands
10 which have been treated in the past; in other words,
11 regenerating stands.

12 So I assume as soon as we have some
13 information from those plots we are starting to get
14 information on treatment responses.

15 Q. Would it be fair to describe the
16 program as the first comprehensive and coordinated
17 attempt to link effectiveness of treatment to growth
18 and yield in Ontario?

19 A. I have used the word comprehensive
20 and coordinated yesterday and I had a specific meaning
21 in mind. My meaning was provincial in scope and
22 coordinated provincially and if that's your intent,
23 then I would answer yes.

24 Q. Just following up on that, does that
25 mean that the effectiveness of treatment on growth and

1 yield at this point is not well understood or described
2 at the provincial or regional level?

3 A. Mr. Lindgren, I am glad you brought
4 that point up. Effectiveness probably isn't the
5 accurate word as treatment response is the appropriate
6 word.

7 Effectiveness, of course, would include a
8 whole host of other questions. So if I did use
9 effectiveness, which I think I did, I was referring to
10 growth response.

11 Q. Well, my question is still the same.
12 At the provincial and/or regional level, until you get
13 the results of that study the MNR doesn't really have a
14 lot of information about treatment response at those
15 levels?

16 A. The information that we would have
17 would be local in nature. The specific objective of
18 the growth and yield program is to quantify that type
19 of information and that quantifying the information by
20 species, by site, by treatment is lacking, yes. That
21 is for growth and yield though, not necessarily for
22 regeneration.

23 Q. Professor Armson, perhaps I can
24 conclude by asking you a couple of questions.

25 Now, on page 29 of your witness

1 statement, I don't think you have to look at it, but
2 that is where you discuss slope and you were comparing
3 Ontario to B.C. and I think you were trying to leave
4 the Board with the message that because we have gentler
5 slopes here in Ontario erosion by and large is not as
6 significant here as it is in B.C.

7 Is that what you were telling trying to
8 tell the Board?

9 MR. ARMSON: A. Essentially that the
10 range of slopes is quite different here than in B.C.,
11 yes.

12 Q. Now, do you have a copy of the Code
13 of Practice which has been marked as Exhibit 2276?

14 A. No, not yet. I have it now.

15 Q. Can I ask you to turn to page 3 of
16 this document.

17 A. Yes, I have that.

18 Q. There under the discussion of slope
19 we see a final paragraph which reads:

20 "Slopes over 40 per cent are generally
21 inoperable with conventional equipment.
22 Slopes between 10 per cent and 40 per
23 cent pose a relatively high potential for
24 the entry of road material into a
25 waterbody if the surface organic layers

1 are removed."

2 First of all, do you agree with that
3 statement?

4 A. Yes, that's a reasonable statement.

5 Q. It is my understanding that at least
6 50 per cent of the Ontario land base would fall into
7 the 10 per cent slope -- 10 per cent or greater slope
8 category. Are you able to confirm that?

9 A. Would you mind repeating that one,
10 please.

11 Q. The question was that it is my
12 understanding that at least 50 per cent of Ontario
13 falls into the 10 per cent or greater slope category.
14 Do you have any information on that?

15 A. I can neither confirm nor deny that.

16 Q. Does the Ministry have slope
17 information at the provincial or regional level that
18 would allow us to determine where we have slopes
19 between 10 and 40 per cent?

20 A. At the provincial level there are
21 maps available, but I honestly cannot say yes or no.

22 I believe there would be information in
23 certain areas on certain maps, but if it is consistent
24 throughout the province I'm not aware of it, but others
25 may be able to answer that question.

1 Q. Can we agree that practices such as
2 skidding or blade scarifying or disc trenching, all of
3 those have the potential to remove surface organic
4 layers?

5 A. Yes.

6 Q. Okay. Did I hear you say yesterday
7 that the MNR has not mapped soils of less than 30
8 centimetres in depth at the unit or district level?

9 A. There may be some units where there
10 is that information. One unit that I personally soil
11 mapped some 10 or more years ago had some relevant
12 information in it, but as a general statement the
13 answer is no, not to my knowledge.

14 Q. Similarly, has the MNR mapped slope
15 at the unit or district level?

16 A. Not to my knowledge as a consistent
17 factor.

18 MR. LINDGREN: Thank you, panel.

19 Thank you, Madam Chair. Those are my
20 questions.

21 MADAM CHAIR: Thank you, Mr. Lindgren.

22 Mr. Gordon?

23 MR. GORDON: Mr. Lindgren, you made some
24 comment about a statement that Mr. Callaghan made and
25 you were going to give me an opportunity to discuss

1 that with you:

2 MR. LINDGREN: Well, I am glad you
3 reminded me. Let me put the same question that I put
4 to Mr. Callaghan and I will let you respond.

5 Q. I referred Mr. Callaghan to pages 200
6 to 202 of the silvicultural costing report and that has
7 been marked as Exhibit 2226.

8 Again, for the purposes of the record I
9 will just indicate that on page 200 we see a species
10 composition summary for FFT scenario one, then under
11 the softwood category we see a 90 per cent component.

12 On the following page, page 201, which is
13 FFT scenario two we see an 80 per cent softwood
14 component and on page 202 which is the present practice
15 alternatives carried out by the Ministry we see an 80
16 per cent softwood component.

17 The question that I put to Mr. Callaghan
18 and I will put it to you was simply, can you confirm
19 that both of the FFT scenarios end up with a softwood
20 component that is as good as or better than the present
21 practice alternatives?

22 MR. GORDON: When you look at those three
23 levels table on their own simply it appears to say
24 that.

25 What we must remember, though, is in the

1 costing exercise that an extraordinary amount of
2 dollars was put into the FFT scenarios versus the MNR
3 scenario. So, therefore, it is not unreasonable that
4 when you go back to the look at the wood supply that
5 there was a comparable level of conifer.

6 However, what you also have to realize is
7 within those softwood components there are shifts of
8 balsam fir and because of MNR's concern relative to the
9 costing exercising and that different dollar amounts
10 were applied to the different scenarios, what Mr.
11 Callaghan did was took that study a little further and
12 did analysis whereby we were working at constant
13 funding for each of the three scenarios.

14 When you have a similar amount of money
15 available to each of the three scenario, based on the
16 modelling that that Mr. Callaghan went through, and it
17 is MNR's opinion there will be a dramatic shift from
18 conifer to hardwood if he go the scenario routes that
19 relate to FFT.

20 I believe Mr. Callaghan clearly showed
21 that in Exhibit 2265 when you look at the graph that is
22 the second page from the back. That was Exhibit 2265.

23 MR. LINDGREN: Mr. Gordon, I am not going
24 to pursue the questions. You can stand by Mr.
25 Callaghan's evidence-in-chief, I will stand by cross

1 and I think I will end it right there, Madam Chair.

2 MS. GILLESPIE: Madam Chair, there has
3 been some overlap between Mr. Lindgren's
4 cross-examination and what we had planned.

5 I would suggest it would be useful for us
6 to have a break to streamline the cross-examination and
7 hopefully shorten it.

8 MADAM CHAIR: How long will you be, do
9 you think, Ms. Gillespie?

10 MS. GILLESPIE: I think we will still be
11 approximately 45 minutes.

12 MR. KENNEDY: Madam Chair, the panel is
13 prepared to sit if you want to have a short break and
14 return and forego lunch entirely.

15 MR. FREIDIN: My re-examination will not
16 be lengthy. I can't see it being more than 10 minutes,
17 15 minutes absolute tops so far.

18 How much of a break do you need, Nora?

19 MS. GILLESPIE: Just about half an hour.

20 MADAM CHAIR: Why don't we take our lunch
21 break now and come back at 1:15.

22 ---Luncheon recess at 11:40 a.m.

23 ---On resuming at 1:15 p.m.

24 MADAM CHAIR: Ms. Gillespie, how long
25 will you be with your cross-examination?

1 MS. GILLESPIE: I think we will be about
2 half an hour to 40 minutes.

3 MADAM CHAIR: Okay. Shall we get
4 started.

5 MS. GILLESPIE: Madam Chair, just at the
6 outset we would like to make it clear that we don't
7 intend to address all the areas in dispute with this
8 panel during the cross-examination, but we don't want
9 anyone to infer that there is necessarily agreement on
10 or a change in position because we are not
11 cross-examining.

12 There is just simply so much evidence on
13 the record on many of these matters that we don't feel
14 it is necessary or helpful to go back over much of the
15 ground and our response in those areas will be made in
16 final argument.

17 CROSS-EXAMINATION BY MS. GILLESPIE:

18 Q. Mr. Kennedy, at page 12 of the
19 witness statement from Panel 5 you have indicated that
20 MNR does not have the information to map local areas of
21 shallow soils for silvicultural purposes, that the
22 current mapping system is too broad for local
23 silvicultural purposes.

24 Then in response to an FFT interrogatory,
25 No. 2, you were asked how you can implement

1 silvicultural ground rules or directions such as the
2 environmental guidelines without that mapping.

3 As I understand your reply, it was that
4 the mapping of local sites for soil conditions is
5 unnecessary in order to implement silvicultural
6 direction because the appropriate treatments are
7 implemented on the appropriate sites.

8 Can you tell me how it is going to be
9 determined which sites are appropriate for which
10 treatments without that mapping?

11 MR. KENNEDY: A. It is not necessary to
12 have maps available to you when you are preparing
13 silvicultural ground rules which is where the
14 prescriptions are developed for subsequent use and
15 implementation in a timber management plan.

16 What is necessary in developing
17 silvicultural ground rules is the provincial guidance
18 that's contained in silviculture guides and the local
19 experience of the forest manager and their staff and
20 the results that they have obtained.

21 I believe that is the response I gave you
22 and it is in that fashion that we can develop
23 appropriate prescriptions to deal with these local
24 sites.

25 Q. But if we are talking about

1 prescriptions that are related to specific site
2 characteristics, you are going to have to know where
3 those site characteristics are to be found, aren't you?

4 A. Not per se, no. It is important to
5 be able to recognize in the field the types of sites
6 that are present in your management unit.

7 Simply knowing its presence and
8 determining if they are a common occurrence or not
9 would then assist you in developing the silviculture
10 ground rules. It would not be necessary to know where
11 each and every one of those sites occurs throughout
12 your management unit.

13 Q. But you are going to have to know
14 whether those types of sites exist on the management
15 unit or you wouldn't have anything in your ground rules
16 to deal with them?

17 A. That's correct.

18 Q. Isn't it fair to say then in some
19 respects at least the application of the environmental
20 guidelines is going to require pre-harvest inspection
21 of the actual areas?

22 A. No, I don't believe so. The level of
23 knowledge that we currently have in applying -- sorry,
24 developing silvicultural ground rules would be
25 sufficient -- I believe will be sufficient for what we

1 will see coming out of the environmental guideline
2 approach.

3 Q. But how are your operators going to
4 know where to apply the appropriate treatments if they
5 don't know where the sites exist?

6 A. At this time I envisage that the
7 information will be used in a planning sense primarily
8 and if the foresters have identified that certain sites
9 exist on their unit, and there is guidance contained in
10 the environmental guideline which provides direction on
11 certain practices, then it will be necessary then to
12 move towards identifying in which operating blocks at
13 the time of carrying out the operations those
14 characteristics are present, but that does not equate
15 to the need for soil maps information.

16 It would certainly be desirable to have
17 mapped information across the entire province, soils
18 mapping, but as the Board has heard in earlier
19 evidence, I believe starting in Panel 7 when we talked
20 about the type of mapped information available and in
21 subsequent panels described by Mr. Greenwood and Mr.
22 Armson, that although this is desirable it is a very
23 costly enterprise and not one that we require in order
24 to conduct management in the systems that we have put
25 before the Board.

1 Q. Well, it is my understanding from
2 what we have heard about the environmental guidelines
3 that they will be applied to very specific sites and it
4 will be necessary for the foresters to be able to
5 identify where those sites exist on the ground. Would
6 you agree with that?

7 A. I agree that it would be necessary
8 for the foresters to recognize the types of sites that
9 they are managing in a given area and to apply the
10 appropriate prescription, yes.

11 Q. Mr. Greenwood, you have described
12 MNR's proposal to develop interim guidelines with
13 respect to full-tree harvesting based on certain
14 characteristics that are to be identified.

15 I understand that this proposal intends
16 to establish good practices which should be applied
17 where the characteristics occur; is that fair?

18 A. That the guidelines would be
19 considered where those characteristics occur, yes.

20 Q. Would you agree that it is obviously
21 necessary if it is going to be useful as a practical
22 guideline that you would expect to see groups or
23 numbers of sites which will be sharing some of these
24 characteristics?

25 A. I am not sure that I understand your

1 last point.

2 Q. Well, I take it if you are going
3 through the trouble of developing guidelines that are
4 going to be distributed for use throughout the
5 undertaking and which are going to be based on
6 identifying certain practices associated with
7 characteristics, I think is the word that you use, that
8 you are going to be expecting to see numbers of sites
9 that share similar characteristics or the guidelines
10 would be impossible to develop?

11 A. In that sense, if I understand your
12 question correctly, you are describing some sort of a
13 way of classifying sites.

14 I was following your conversation
15 carefully with Mr. Kennedy and I think it comes down to
16 the same point, that one can have a classification
17 system for sites and describe various things that will
18 go on in those sites similar to, for instance, the
19 forest system ecosystem classification and the
20 interpretation manuals what that along with them, and
21 yet not have those sites mapped.

22 So the FEC system system is extremely
23 useful to us and useful in conversations of how we will
24 treat various sites and what we would do even though
25 FECs are not mapped.

1 Certainly mapped classifications would be
2 very, very useful, but in their absence we are still
3 able to discuss what we might do simply by having some
4 sort of a classification system.

5 Q. Okay. I think you have answered my
6 question. I wasn't getting at a mapping issue. I was
7 trying to ask you, and I think you have answered, that
8 you do expect that these guidelines will be based on
9 some kind of a classification system?

10 A. Some way of commonly describing the
11 same piece of ground, yes.

12 Q. Now, we heard some discussion this
13 morning from Mr. Armson about factors that he might
14 expect to see.

15 Can you, Mr. Greenwood, explain a little
16 bit more about what types of characteristics you expect
17 to see developed in these guidelines?

18 A. I think that I would hesitate to do
19 that only on the basis that we recognize we are going
20 to have to bring together a wealth of expertise to do
21 that and I would hesitate to pre-empt what that group
22 might do in that regard.

23 Q. Well, can you help me, Mr. Greenwood,
24 do you expect that we will be seeing classifications or
25 site characteristics that are totally different from

1 the existing ones in say, for example, the black spruce
2 silvicultural guide?

3 A. If I can take you back to my
4 overheads I might be able to explain it in more detail.
5 I am on overhead No. 18, second to last. This is
6 exhibit No. 2305.

7 MR. FREIDIN: What page?

8 MR. GREENWOOD: Page No. 18 or overhead
9 No. 18.

10 This is labelled Approach and the
11 contents of this page that I will bring to your
12 attention is No. 1 and the scientists that put this
13 approach together recognized that at the very beginning
14 they had to come up with some sort of site framework.
15 I think that's what you are describing.

16 Yesterday when I talked about this I
17 suggested that the site framework that they are talking
18 about, in order to allow this common discussion to take
19 place, would be based on soil, texture and moisture
20 primarily for jack pine and black spruce.

21 I also indicated that it is expected to
22 be something along the lines of the edatopic grid that
23 I described in more detail for the growth and yield
24 program.

25 I understand what they are going to

1 attempt to do is to on this two-axes gradient attempt
2 to locate where various species would be found growing,
3 the range in the context of the site framework based on
4 texture and moisture.

5 So in answer to your question, the
6 description that will be used to determine the
7 classification system that will be used in this regard
8 is based on texture and moisture.

9 Q. When you use those terms, soil,
10 texture and moisture, are you using them in the same
11 way that they are used in the current silvicultural
12 guides?

13 A. Yes, as well as the manual for soil
14 description put out by the Ontario Institute of
15 Pedology which has standard labels with respect to both
16 moisture and texture.

17 Q. Mr. Kennedy, we heard from you in
18 Panel 2 that I believe the environmental guidelines are
19 anticipated to contain both mandatory requirements and
20 good practices recommendations.

21 There was some discussion about this this
22 morning with Mr. Lindgren and I just had a question of
23 clarification.

24 From your Panel 2 evidence we understood
25 that to mean that guidelines similar to the

1 environmental guides for access and road water
2 crossings which contain mandatory and recommendations
3 type provisions, can you confirm whether the interim
4 guidelines being developed as part of the environmental
5 guideline will have both mandatory provisions and good
6 practice recommendations or whether it will be
7 something different?

8 MR. KENNEDY: A. I confirm right now
9 that option is open -- sorry, the options are open.

10 I can't tell you or advise you which way
11 that will go until we see the results of the study that
12 is being done and develop that interim guidance. I
13 would not forego the possibility that there may be a
14 mandatory approach used in that aspect or it may be
15 left simply left to good practices.

16 Q. Mr. Kennedy, can you explain how the
17 interim guidelines you have been talking about will be
18 integrated with the silvicultural guides?

19 A. I think this would be the subject
20 matter of timing, that those guidelines may be still
21 under development. When we have the results of the
22 study that Mr. Greenwood was referred to we will be
23 able to incorporate them directly in that first
24 revision.

25 Other guidelines -- silvicultural guides,

1 I should say, may have to await until the next
2 scheduled revision in order to incorporate those items
3 and if indeed there are additional matters that are
4 pressing and need to be conveyed, I think there are a
5 variety of techniques that MNR uses where we can issue
6 everything from a bulletin to a technical note which
7 would augment or supplement the silvicultural guide if
8 there is a need to get information out more
9 meaningfully.

10 Q. I also understood this morning that
11 the interim guidelines are part of the environmental
12 guidelines. How will the environmental guidelines when
13 they are available be integrated with the silvicultural
14 guides?

15 A. As you are aware, the timing, we are
16 intending to work on the environmental guidelines upon
17 the close of this portion of the hearing and start
18 right away. At the same time, the same group of people
19 that I mentioned today are working on the silvicultural
20 guides.

21 So in that sense I think they will be
22 complementary and it may be that there will be some
23 overlap between them, some duplication of content to
24 ensure that the subject matters are properly dealt with
25 within the silvicultural guide and those relevant

1 matters as per the topics that we described for the
2 environmental guideline would also be covered.

3 Q. Can you advise whether MNR intends to
4 be monitoring for compliance with the environmental
5 guidelines?

6 A. I believe a quick answer would be
7 yes, just as with all implementation manuals. As we
8 look at using them in the preparation of plans and in
9 setting prescriptions, that we would look at relevant
10 compliance to plan preparation and implementation in
11 the same manner as we will with all other
12 implementation manuals.

13 Q. And then can you tell me whether you
14 anticipate that you would consider 69 per cent
15 compliance a rigorous application of the environmental
16 guidelines that Mr. McNicol considers 69 per cent a
17 rigorous application of the moose guidelines?

18 A. Madam Chair, I (inaudible) as to how
19 to answer that question. I think dealing with
20 percentages, perhaps they speak for themselves.

21 I think that that is -- the 69 per cent
22 that you are referring to, as I recall, referred to
23 some specific figures that were pulled together
24 reflecting a particular situation in one district.

25 I think that knows numbers are certainly

1 acceptable in the early stages of implementing the new
2 style of management. I would not be surprised if in
3 the early stages of implementing the environmental
4 guideline we will see similar numbers on occasion in
5 particular districts and there they may well be some
6 that are higher or lower.

7 Certainly we strive over time to improve
8 our knowledge base to provide our people with the best
9 available information. The Board has heard me describe
10 in earlier evidence during reply our new effort towards
11 training and development of staff, sponsoring
12 workshops, as I said, particularly with the development
13 of new programs and our dedication to do that by
14 establishing a new section in Sault Ste. Marie to
15 implement just those programs.

16 So I think that there is a desire -- or
17 we have a desire to continue to improve and strive for
18 a hundred per cent compliance and realize that there
19 are many more factors that come into play including the
20 human factor and no one is perfect.

21 Q. Thank you, Mr. Kennedy. In term and
22 condition No. 20(c) I believe MNR has committed to
23 establish a system of general standard site types and I
24 understand then that MNR revision to the silvicultural
25 guides will be done using these general standard site

1 types that are developed.

2 Can you tell me how the results of the
3 long-term studies that Mr. Greenwood described this
4 morning will be integrated into the timber management
5 planning process when we heard that you will not be
6 using the general standard site types in that study?

7 A. Are you referring to the results of
8 the growth and yield initiative, one of the two topics
9 that Mr. Greenwood spoke to?

10 Q. I believe the question would apply to
11 both studies.

12 A. I believe the response in the growth
13 and yield study has been provided in response to an
14 interrogatory that you have asked, and as I recall
15 without referring to it now that our response is of the
16 nature that the work that Mr. Greenwood has described
17 and the detailed stratification process being used in
18 that study will provide us with adequate representation
19 of the types of general -- sorry, of the general
20 standard site types that are found in the province.

21 That indeed the type of stratification,
22 the levels that Mr. Greenwood has described, is far
23 more detailed than the general standard site type
24 information and in the discussions I have had with him
25 in consulting with answering your interrogatory that at

1 some point in time it will then be possible to compile
2 the results from the various plots that Mr. Greenwood
3 speaks to the general standard site type level and use
4 the results of that information in guiding our future
5 developments.

6 There are a variety of other ways in
7 which the information that Mr. Greenwood has spoken to
8 will influence timber management planning; everything
9 from assisting us in determining what proper growth
10 rates are for Ontario's forest, what expected yields
11 can be in the future undertaking certain treatments.
12 It will assist us in properly updating our forest
13 inventories rather than having to remeasure.

14 Those are just a few examples of the
15 kinds of ways in which I look forward to applying the
16 results of the studies that Mr. Greenwood has referred
17 to.

18 Q. So, Mr. Kennedy, if I understand your
19 answer, MNR does intend to compile the results from the
20 studies into a form where they can be reflected by
21 looking at the general standard site typies, there
22 could be a link with the general standard site types
23 and from there to the grounds rules?

24 A. I would say there certainly can be a
25 link. I can say it is not our intention at this time

1 to specifically commit to make that specific link.

2 The reason we are not committing to that
3 is Mr. Greenwood and I believe that in the future there
4 may well be better ways of describing that link and we
5 would expect to see this information, again that Mr.
6 Greenwood has referred to, evolve through such --
7 potentially evolve through such program as ecological
8 land classification programs which may be a better tool
9 to add at some point in the future replace the general
10 standard site type approach.

11 Certainly the intent is the same as those
12 of which you have described.

13 Q. Mr. Kennedy, this morning you also
14 told us that the first effort with respect to the
15 revision of the silvicultural guides will be the
16 development of a mixedwood silvicultural guide.

17 Can you tell us whether or not that guide
18 will use the general standard site type?

19 MADAM CHAIR: Ms. Gillespie, why don't
20 you change microphones with Mr. Sutterfield or Mr. Bax.
21 We are getting a lot of noise here.

22 MS. GILLESPIE: Q. Did you hear the
23 question Mr. Kennedy?

24 MR. KENNEDY: A. Yes, I did hear the
25 question. In short, yes, it is our intention to look

1 at applying the general standard site type approach in
2 looking at the mixedwood guide.

3 Q. Mr. Bisschop, yesterday we heard some
4 evidence from you with respect to concerns that MNR has
5 with the MOE proposal contained in term and condition
6 40(b). I would just like to ask you a few questions
7 about those concerns.

8 I take it we are in agreement that the
9 public is interested in access issues and road
10 corridors?

11 MR. BISSCHOP: A. No question.

12 Q. In fact, this is one of the reasons,
13 this public interest, that you gave for providing an
14 alternative analysis for road corridor locations?

15 A. Yes. I explained that the public
16 interest, the nature of the activity, the risk of harm
17 is one of the reasons why we approach the question of
18 road planning from an environmental planning kind of
19 perspective.

20 Q. I also understand that it is MNR's
21 general policy to permit public access on roads, but
22 that there are circumstances where you may require a
23 restriction on access in order to mitigate the
24 competing effects on a value, such as a tourist
25 operation; is that fair?

1 A. Yes, that's correct.

2 Q. I think we have also heard evidence
3 that there are commonly conflicts between members of
4 the public who wish to use roads for access purposes
5 and those who want to restrict access for the
6 protection of these other values?

7 A. Yes. That's a common problem, yes.

8 Q. In making a decision to restrict
9 access there is, in effect, a decision to protect one
10 group's interest over the objections of another?

11 A. Yes.

12 Q. We have also heard evidence that
13 there are practical problems in enforcing the
14 restriction of a road -- of access on a road if that's
15 the decision that has been made. Because of these
16 conflicting wishes of the public some people just do
17 whatever they can to get around whatever restriction
18 you put on the road, such as gating?

19 A. Yes, that has been our experience.

20 Q. I also understand that the MNR use
21 management strategy tries to resolve the conflict
22 between the people who want access and those who want
23 to restrict access, but that there is no analysis in
24 that strategy of an alternative which may not require a
25 restriction such as gating?

1 A. I would suggest that in any situation
2 where you have, if you will, competing interests in
3 terms of opened roads versus closed roads, that just
4 naturally the development of the use management
5 strategy for that road you will consider those
6 competing interests.

7 As we have indicated, our general policy
8 is that roads would remain open. There will be
9 situations from time to time, and I believe earlier
10 evidence of MNR is being in the order of -- I may need
11 to be corrected on this, but it would simply be a minor
12 difference, about 9 per cent of the roads in the
13 province have some form of closure restriction.

14 The consideration of opened versus closed
15 and the views of the various participants in those
16 decisions are all taken into account in the decision
17 making and there will be situations in which some
18 people who wish to have roads open will lose in that
19 decision making for the protection of other values.

20 Q. That really wasn't my question, Mr.
21 Bisschop. I will try to clarify it.

22 As I understand it your use management
23 strategy, when you use that term, is really looking at
24 a location and trying to balance whether you are going
25 to have that particular location opened or closed. The

1 use management strategy does not look at a whole other
2 location that may not require a restriction?

3 A. You will have to help me. I am not
4 sure what you mean by location.

5 When we deal with the use management
6 strategies we deal with the entire length of a road.
7 We look at is there a necessity to have closure
8 restrictions or is general public access permitted.

9 Q. Okay. Let me switch back to the word
10 corridor. You are looking at one corridor and use
11 management is the way you decide whether that corridor
12 will be opened or closed?

13 A. We look at it for the entire
14 -corridor, yes, and in the analysis of alternative
15 corridors to a location, we would assess each corridor
16 individually from that perspective and it may be that
17 some corridors might require use restrictions and some
18 may not. It may be that all options would require some
19 restriction.

20 Q. Would you agree it is a sensible
21 approach if you can do it to avoid this conflict
22 entirely, to avoid the issue of whether or not a road
23 has to be opened or closed?

24 A. Yes, I would agree.

25 Q. So I think that if the intent behind

1 term and condition 40(b) as proposed by MOE is that
2 there always be an alternative presented which does not
3 require restrictions, that's a sensible alternative to
4 propose because the conflict is avoided?

5 A. I guess I will have to repeat the
6 evidence that we gave in direct on this.

7 Basically we have two concerns, I guess,
8 with the way the condition is worded. First of all,
9 the condition includes the word must and when we see
10 that that tells us that one has to, regardless of the
11 reasonability and practicality of a road corridor in
12 terms of trying to go from point A to point B, would
13 have to consider a road corridor alternative is not
14 closed.

15 We would, however, expect that MOE's
16 intent really is that you would have to have a
17 reasonable and practical corridor to be considered.

18 So, in other words, if you had a problem
19 of a tourist operation, for example, between two lakes
20 or on the shore of one lake and the alternative
21 corridors that one considers to get to that because we
22 need access for harvest purposes would be in the
23 vicinity of that operation.

24 You wouldn't want to have to consider an
25 unreasonable unpractical alternative of going

1 circuitously around the lake to avoid the tourism
2 operation. It would have to be a reasonable and
3 practical alternative.

4 There will be situations from time to
5 time where it is simply impossible to identify a
6 reasonable, practical alternative that avoids the
7 requirement to have access restrictions. So in that
8 sense the wording of the condition troubles us because
9 the word must is included.

10 Q. Do I understand from your answer
11 there then that where there are reasonable and
12 practical alternatives for an unrestricted access road
13 you will put that alternative forward?

14 A. I think we would approach the
15 question differently. We would identify all reasonable
16 and practical optional corridors to get from point A to
17 point B.

18 We would look at each of those corridors
19 independently in the consideration of the use
20 management strategy, for that particular corridor do we
21 need use restrictions or don't we and it may be that
22 all of them require use restrictions, it may be that
23 one out of three hypothetically doesn't and that would
24 be a consideration taken into account in making a
25 decision on where the road would go, and all things

1 being equal one would select the corridor that did not
2 require the use closure restriction.

3 Q. Mr. Bisschop, I believe you also gave
4 some evidence about general principles of good
5 environmental planning decisions and you stated that
6 they require the consideration of alternatives and
7 options including an analysis of advantages and
8 disadvantages and an opportunity for public input and
9 comment on the options and a selection of the option
10 after that input and a documentation of the reasons for
11 your decision.

12 Would you agree that those are the
13 principles of good environmental decision making?

14 A. Yes, that's how we have characterized
15 it.

16 Q. I believe you have also stated that
17 the level of analysis required and the details of this
18 exercise vary according to the issue and the
19 circumstances?

20 A. Yes, and the specifics of the
21 decision you are making. I used the example about a
22 corridor, a road corridor level decision being
23 different from a specific road location decision where
24 you are dealing with a specific value and a specific
25 location.

1 Q. You will agree that also the number
2 of reasonable alternative varies with the nature of the
3 decision being made?

4 A. Exactly, and that's why in the case
5 of roads we have approached the subject of definition
6 of number of alternatives from the perspective of
7 consider these factors rather than consider a minimum
8 of two and a maximum of five.

9 Q. Also, as I understand it, the MNR
10 proposal includes this type of environmental analysis
11 for road corridors and area of concern prescriptions
12 only; is that correct?

13 A. Yes.

14 Q. So I take it we can conclude from
15 that that MNR has decided that road corridor locations
16 and area of concern prescriptions are the only
17 decisions in the timber management process that require
18 good environmental analysis and decision making?

19 A. I can't agree. Madam Chair, MNR has
20 addressed this question very carefully and I think the
21 best answer I can give you is to direct you very
22 specifically to Exhibit 2254B, MNR's answer to the
23 Ministry of the Environment interrogatory question No.
24 3 for Panel 1.

25 In my earlier direct evidence I referred

1 to that question and indicated that that in written
2 words capsulizes best my presentation on the whole
3 subject of the optional areas proposal of the Ministry
4 of the Environment.

5 Q. Well, I think that Mr. Kenny will
6 tell you that we had an extensive discussion about that
7 interrogatory answer in that panel and I don't propose
8 to go through it again today, but I am not sure that
9 you really answered my question.

10 You have told us what environmental
11 analysis requires and you have told us that the only
12 time that you do it is with the road corridor location
13 and area of concern prescription.

14 So I don't see how you can disagree that
15 MNR has decided that that's the only type of decision
16 that requires that kind of analysis?

17 A. In my explanation, Madam Chair, of
18 what I referred to as the elements of principles of
19 environmental planning and where the requirements for
20 considering environmental analysis fit in, we said it
21 depends on the nature undertaking you are dealing with
22 the, the activities you are dealing with, the values
23 that are affected and the risk of harm.

24 In the case of the undertaking of timber
25 management, MNR contends that this hearing itself - for

1 some of us the ten plus years that we have spent
2 dealing with the question of environmental
3 acceptability of the undertaking, if you will - this
4 hearing itself will make the decision on some aspects
5 of the acceptability of timber management practices.

6 There are other aspects and by that I
7 mean the activities themselves. There are other
8 aspects of the practices that will be dealt with at the
9 local level through the planning process that will be
10 applied, in particular the more detailed planning
11 requirements related to roads, both from the corridor
12 and the locational level and the activities of harvest,
13 renewal and maintenance in areas where there are other
14 values.

15 We contend that the environmental
16 planning principles that I talked about at the
17 management planning level, the project planning level,
18 if you will, that follows the decision of this Board
19 are appropriately applied for those activities where
20 there are the concerns expressed by the public with
21 respect to the values and where there is a risk of
22 greatest harm.

23 For the remainder of the land area, if
24 you will, on which timber management activities occur,
25 in effect the Board's decision will have said that the

1 activities MNR conducts, MNR and industry conduct and
2 the manner in which they do them are environmentally
3 acceptable and there is no need to address at the local
4 level further consideration of, in simple terms,
5 further consideration of alternatives.

6 Q. So if I understand your answer, the
7 Board approves this undertaking and if there is no
8 specific term and condition requiring a consideration
9 of alternatives for areas of harvest, then it would be
10 your view that no such consideration of alternatives
11 for harvest areas is required or will occur?

12 A. As a routine requirement of the
13 planning process, no. The effect of the Board's
14 decision will be that timber management activities are
15 approved for those Crown lands on which timber
16 management is a permitted use, subject to the more
17 detailed requirements of timber management planning in
18 timber management plans every five years there will be
19 more detailed decisions made about where timber
20 management activities may not occur, but other than
21 that timber management will occur on virtually all of
22 the land area at some point or another during the
23 rotation.

24 It becomes a question really a matter of
25 scheduling; are the activities going to occur in this

1 five years or are they going to occur in the next five
2 years or are they going to occur at some point in the
3 future.

4 So the whole question of alternatives
5 available to you is not so much the question of
6 alternative places to go as timing.

7 Q. I believe we have already discussed
8 the issue of scheduling and whether the public would be
9 interested in some input into scheduling alternatives.

10 Mr. Bisschop, you raised several very
11 specific concerns with MOE's proposal contained in
12 Appendix with respect to alternatives for harvest
13 operations and your major concern seemed to be that you
14 thought the proposal lacked definition that was made.

15 As I understood it you took issue with
16 the fact that it didn't specify the number of
17 alternatives that would be required and didn't specify
18 the details of the analysis.

19 I am a little confused by your position
20 in this regard because both yesterday and today you
21 criticized other terms and conditions because the
22 number of alternatives weren't set out or the details
23 were too rigid and you didn't have enough flexibility.

24 Can you tell us which position you are
25 taking now? I mean, we really are unsure whether you

1 want us to specify the number of alternatives or not.

2 A. First of all, I wouldn't characterize
3 MNR's major criticism as being the way you have
4 characterized it.

5 It is simply, if it were better defined
6 it would be something that we would understand better
7 and, therefore, it would be acceptable and we could
8 live with it. I think that's one of the elements of
9 it.

10 In Exhibit 2299 on page 8 we outlined a
11 number of concerns we had about it. We introduced the
12 subject through the Big Pic map, Exhibit 2301, to try
13 to give the Board some impression the basis of our
14 concern being exactly what is it that would be required
15 of us, and in that sense we raised the subject of
16 numbers of options to consider.

17 Do we need just three, do we need three
18 for every operating block, do we need 30, do we need
19 various permutations and combination and when you start
20 to look at, for example, the possibility of various
21 permutations and combinations we essentially translate
22 that into, in effect, alternative timber management
23 plans for the five years.

24 From that perspective we see a large
25 planning effort, a considerable amount of time

1 involved, considerable documentation to satisfy the
2 interest of anyone who is potentially affected and may
3 wish that someone else other than themselves were
4 affected and, of course, the attendant documentation
5 requirements.

6 We just think particularly when we go
7 back to the concept that we are talking, in effect,
8 scheduling. We see that planning effort as something
9 that is considerable, but also, by the way, require
10 additional public consultation after we believe and we
11 don't see that it is necessary.

12 We don't see that the public generally --
13 and people will of course be amused that Al Bisschop
14 speaks about the practicality of things in the field
15 when I have never produced a timber management plan,
16 but I can assure you my colleague, Mr. Kennedy, has
17 spoken to this. We don't see that the public has been
18 asking for this as a routine requirement.

19 There are situations from time to time,
20 yes, and our response to that has been that, first of
21 all, we would explain, as I indicated in my response,
22 we would explain in every timber management plan and in
23 the information that we present publicly how the
24 application of selection criteria got us to where we
25 are proposing operations to occur. That would, by the

1 way, be done with the involvement of representatives of
2 the public; the local citizens' committee.

3 The public would have an opportunity to
4 comment to the extent of their ability on the selection
5 criteria, they would have their opportunity through the
6 various phases of public consultation to comment on and
7 contribute to refinement of where operations are going
8 to occur because the final decisions won't be made
9 until, first of all, and they are not final, a draft
10 plan is presented which is subject to further
11 refinement and we we do present an improved plan people
12 will have the option of back-up to quarrel with
13 decisions.

14 - Q. Okay. I don't want to go back
15 through all of the evidence that you have gave
16 yesterday, but what I am asking, leaving aside your
17 other concerns and talk about this business about poor
18 definition and that we don't tell you the number of
19 options to consider or the level of analysis required.

20 I can advise you that MOE is attempting
21 to propose a straightforward and flexible term and
22 condition which set out the objective of putting
23 alternatives before the public and was leaving the
24 flexibility of the implementation to you as
25 professional planners.

1 Would you agree with me that the MNR
2 terms and conditions dealing with alternatives do not
3 specify the number of alternatives to be shown?

4 A. I would agree on the latter point.

5 I have a comment on your introductory
6 comments. I think we understand what MOE's intentions
7 were. We have serious concerns about the level of
8 knowledge within the MOE staff proposing the approach,
9 but the actual practicalities of how to do it.

10 In the MOE evidence an example was
11 provided concerning the level of analysis and the
12 attendant documentation that would be expected when one
13 is comparing, I assume from the example, three optional
14 areas.

15 Well, is that three optional areas for
16 one operating block? Is that three possible
17 permutations and combinations of a host of operating
18 blocks? The practicality of the suggestion raised all
19 of these concerns.

20 Q. But you have already told us, Mr.
21 Bisschop, that the number of reasonable alternatives
22 and the level of analysis is part of the expertise of
23 the environmental planners and that's why it has been
24 left flexible for the people at MNR doing the analysis
25 to decide what's reasonable having reviewed the nature

1 of the decision.

2 Would your concerns be addressed if the
3 wording in Appendix 4 was amended to incorporate MNR's
4 words 'consideration of a reasonable range of practical
5 alternatives'?

6 A. No, I don't believe so. I think the
7 bottom line from MNR's perspective is we see the
8 requirement as unnecessary. We see more a efficient
9 way to address the concern that MOE has and that's what
10 we have proposed in our response.

11 The essential consideration from our
12 perspective is that we are dealing in the context of
13 that subject area primarily with scheduling decisions
14 as to when timber management activities will occur in
15 areas of Crown land where timber management is a
16 permitted use and we would prefer to deal with the
17 issues head on through the issue resolution procedure
18 and, thereby, focus the requirement for that kind of
19 consideration.

20 Q. Okay. The other point that you
21 raised that we wish to discuss a little bit further
22 with you today is whether or not there is a need for an
23 additional public consultation stage arising from this
24 proposal.

25 As I understand the MNR proposal it

1 requires consideration of road location alternatives or
2 road corridors alternatives after the areas to be
3 accessed for harvest have been selected; is that
4 correct?

5 A. I would suggest that everything is
6 happening simultaneously but, yes, we plan our roads
7 within the areas that have been, first of all, selected
8 for operations and we plan the other activities, for
9 example, the area of concern planning within that area
10 as well.

11 Q. When you say everything is happening
12 at the same time, you are talking within MNR's
13 planning?

14 A. Within the practical application of
15 the planning process. It is not so much a matter of
16 absolute sequential as things are going on together.

17 You are identifying, you are selecting
18 the areas which operations are going to occur, part of
19 that is the consideration of what access is required
20 and that's going to influence how you are fine tuning
21 the geography that's selected and then you would
22 proceed with more detailed road and area of concern
23 planning, yes.

24 Q. But you would agree with me that when
25 you look at the public consultation process that the

1 areas have been selected at the time of the first open
2 house and that the alternative for road corridors are
3 presented at the time of the second open house?

4 A. I'm sorry, I lost you there.

5 Q. I'm sorry, I am getting the stages
6 mixed up with the open houses again.

7 The areas have been selected prior to the
8 first open house; is that correct?

9 A. The areas have been selected. I
10 would suggest it is the preliminary selection subject
11 to refinement depending on public public comment.

12 The areas had been selected, the road
13 planning to the point of identifying alternatives and
14 evaluating them has been done. No decision is made
15 yet. Area of concern planning has been done within
16 that selected area as well except for the application
17 of guidelines which prescribe exact prescriptions.
18 There will be some areas of concern in which a
19 prescription has not yet been selected.

20 So we have, if you will, a preliminary
21 identification of the areas selected for operations, we
22 have the alternatives for road and where appropriate
23 the alternatives for areas of concern prescriptions
24 going public at the first information centre, the
25 second stage of public consultation, and we invite

1 comment on the areas selected on the alternatives for
2 roads and area of concern prescriptions, and then
3 following that we will refine and make our draft
4 decisions which are then subject to public review
5 again.

6 Q. Now, you mentioned that in your view
7 that access and areas for harvest are really
8 inter-related. Would you agree that in a general way
9 at the time you are looking at the areas to be selected
10 you are also taking into consideration access issues?

11 A. Yes, access considerations are in
12 effect -- well, they are part of the selection
13 criteria; the ability to use existing access, the
14 requirments for additional access.

15 Q. So would it not be possible to show
16 some options for the areas which include in a general
17 way an aspect of access at the first open house?

18 A. Again, it gets us back into the
19 question of how many options, how much planning would
20 you need to do, how much analysis would you need to do
21 to allow the public to have an opportunity to in an
22 informed way contribute to decisions.

23 Q. But you will agree with me that it is
24 possible to do that at the first open house, to show
25 options for areas of harvest which haven't as an aspect

1 of them in a general way access considerations?

2 A. I agree it's possible. It is a
3 matter of the workload and the level of analysis that
4 one would have to develop and provide to the public.

5 Q. If that occurred you could have
6 public input on those options and after the first open
7 house and at the second open house when the areas have
8 been selected with public input you could have a more
9 detailed level of road planning analysis and
10 alternatives at the second open house?

11 A. Ms. Gillespie, what you are
12 suggesting, there is no question it is possible. It is
13 a matter of the practicality of doing it and the
14 workload involved, the identification of a reasonable
15 range of alternatives for consideration, the workload
16 of planning the roads, the workload of addressing all
17 of the values.

18 We contend that, in effect, what you will
19 have to be doing is presenting to the public
20 alternative timber management plans, at least from the
21 five year up operations point of view, for comment and
22 we think that the workload involved in doing that, the
23 planning effort involved in doing that is enormous.

24 Q. Leaving that aside for this moment,
25 you would agree with me that if you follow the

1 procedure we have just described there is no need for
2 an additional open house?

3 MR. KENNEDY: A. Ms. Gillespie, I have
4 been sitting quietly listening trying to frame your
5 questions along with the evidence that I gave in
6 earlier panels on this matter dealing with the public
7 consultation and open house and listening to Mr.
8 Bisschop's responses.

9 I think you are hearing the same messages
10 from us, indeed that we do believe there would be a
11 need for an additional open house, an additional
12 opportunity. In the situation that you have described
13 if one was to present...
14 ---Discussion off the record.

15 MR. KENNEDY: A. Ms. Gillespie, if I can
16 remind you of some of the evidence that I have earlier
17 that indeed we take the position that an additional
18 consultation exercise, and we believe the information
19 centre/open house style would be the appropriate way to
20 conduct it, would be required.

21 I am speaking from the experience that I
22 have had in this area where if you were to present the
23 publics with a range of options for them to consider
24 they would indeed provide comments and they would
25 require to see the results of their comments and they

1 would be expecting to see it coming back to them with
2 further proposals in response to that narrowing down
3 aspect and that would still then require further
4 delineation in the planning process and we believe it
5 will require an additional...

6 Q. I guess I don't understand that, Mr.
7 Kennedy, because what I was attempting to describe was
8 the situation where these options had been presented in
9 the first hope house, the refinement would occur and
10 then you would see the results in the second open house
11 where you would present the selected areas instead of
12 at the first open house and your detailed level of road
13 analysis would be there.

14 A. That takes us right into the
15 practical problem of the next level of detail. To do
16 as you described would require us, not to have an
17 additional information centre, would require us to do
18 the full level of planning that we have put forward in
19 our planning process.

20 It would require us for each and every
21 one of those option areas to gotten down to the level
22 of deciding where the values were, determining where
23 the values are, going through the prescription process,
24 the area of concern planning, documenting that with
25 full evaluation and the same with the road.

1 Each road corridor would require a
2 detailed consideration in the documentation and an
3 evaluation. It would require us then to do that full
4 level of material and, as Mr. Bisschop has indicated,
5 it would have the effect of providing optional timber
6 management plans for each one of those areas and,
7 indeed, you intend to operate on a smaller portion.

8 So the choices are conducting a
9 significant amount, although we can't characterize how
10 much because, again, we are really unsure as to how
11 much operating blocks or additional optional areas
12 would be required, either that approach or come back
13 with a second information centre or an additional
14 information centre.

15 Q. I guess we are just going to have to
16 disagree on that, Mr. Kennedy, and we will leave that
17 for final argument.

18 There is one another other area in your
19 evidence I wanted to ask a question on, Mr. Bisschop,
20 and that is with respect to your overhead, I believe it
21 is page 9, where you list MNR's responses to MOE's
22 proposal.

23 One of the responses that you listed is
24 the DLUG amendment provision and if I understand your
25 evidence you are suggesting that people who wish to

1 have input on where harvest is going to occur should go
2 through the DLUG amendment process; is that correct?

3 MR. BISSCHOP: A. Well, I wouldn't
4 characterize that as my evidence. What I am suggesting
5 is if people have a concern about operations in an
6 area -- and I think Mr. Kennedy spoke to this at length
7 in his cross-examination of Panel 1. I was unable to
8 be here at that time and I didn't want to repeat that
9 evidence the other day.

10 He indicated that if people have a
11 concern about operations which is basically what I
12 would characterize as a concern about the land use of
13 the area, that another mechanism that is outside of
14 timber management planning itself that is available is
15 to pursue the opportunity for an amendment to the
16 District Land Use Guidelines.

17 Q. Can you give us some idea of how long
18 that process would take?

19 MR. KENNEDY: A. Ms. Gillespie, I
20 believe I mentioned that in earlier evidence, that it
21 is possible to what I call piggyback district land use
22 amendment on top of some of the timber management
23 planning processes.

24 So it could take as little as four to six
25 months in the case of amendment or indeed it may take

1 longer depending on the nature of the exercise. So as
2 little as four to six, perhaps as long as 12 to 18.

3 Q. Can you give us some why of how long
4 it normally takes?

5 A. That I could not. Although I am
6 familiar it has been used on a number of occasions, I
7 can't say I kept close enough in contact with those
8 people to able to report to you about how long it took.

9 Q. Can you tell me whether or not you
10 are prepared to suspend the timber activities in the
11 area in controversy until a decision on a DLUG
12 amendment is reached?

13 A. I think there are situations where
14 that may be the appropriate way to proceed. What you
15 are talking about is not suspending operations because
16 in this situation we are talking about a planning
17 process and talking about trying to resolve those
18 issues during the planning process and potentially some
19 of them through the issue resolution process and, as
20 Mr. Bisschop describes, there are some issues that come
21 forward that are beyond timber management concerns --
22 sorry, timber management beyond the realm of dealing
23 with them in the timber management planning process and
24 those are the ones that would properly be considered
25 for District Land Use Guideline amendments.

1 Q. Well, would you agree that one of the
2 situations where you would be prepared to suspend
3 activities would be where the process is taking long
4 enough that activities in question would be proceeding
5 without its suspension?

6 A. I really can't give you categorically
7 a yes. It will have to remain a case-by-case
8 situation. There are such a variety of situations that
9 can be encountered out there that it would be unwise to
10 say it is an automatic proper course of action to take.

11 I say that in that knowing the types of
12 situations, again, in my experience where requests for
13 changes to District Land Use Guideline status for
14 particular zones have come forward.

15 Some of them take the same form that I
16 would characterize as opportunities under bump-up.
17 People can come forward with any request. Occasionally
18 we get requests that are frivolous and vexatious, other
19 situations you get requests based on new information
20 and certainly those are ones that should be properly
21 dealt with.

22 MS. GILLESPIE: Thank you panel and thank
23 you, Madam Chair. Those are mall all my questions.

24 MADAM CHAIR: Thank you, Ms. Gillespie.

25 Mr. Freidin?

1 RE-DIRECT EXAMINATION BY MR. FREIDIN:

2 Q. Three questions. The first one for
3 you, Mr. Grvelines. When you were being cross-examined
4 by Mr. Lindgren he asked -- you talked about your
5 forest values program and he asked you whether you
6 would attempt now to determine the socio-economic
7 impacts and then you referred to having hired Dr.
8 Kubursi and continued your answer.

9 What did you under Mr. Lindgren to mean
10 when he referred to socio-economic impacts?

11 MR. GRVELINES: A. I took that term to
12 refer to employment, regional employment effects, that
13 sort of thing.

14 Q. Regional employment effects of
15 expenditures?

16 A. Yes. I'm sorry, yes.

17 Q. Mr. Armson, there was
18 cross-examination of Mr. Gordon by Mr. Lindgren and he
19 invited you to deal with this on re-examination. It
20 was on the subject matter about -- well, this was the
21 question to Mr. Gordon: Is it your opinion that larger
22 cuts have greater potential to affect moisture than
23 smaller and Mr. Gordon said the size of clearcuts in
24 Ontario. I don't see it as a relevant point.

25 Do you have anything to add to Mr.

1 Gordon's answer?

2 MR. ARMSON: A. Well, I would agree
3 because the size of clearcutting itself is no direct
4 effect on the amount of moisture that the area receive
5 which is in the form of precipitation or in
6 groundwater.

7 The basic chain of loss is through
8 evapotranspiration and, in fact, the normal thing after
9 cutting is for the soils to become more moist than it
10 would with the existing established stands.

11 Q. Thank you. The last question is for,
12 Mr. Kenny. You were asked some questions about Mr.
13 Benson's evidence regarding LTSY and maximum
14 sustainable harvest.

15 The question was put to you that Mr.
16 Benson calculated long-term sustainable yield for the
17 Domtar unit and your answer was: I am aware he has
18 used his model, but I am not aware of the criteria that
19 he used.

20 When you refer to criteria, what sorts of
21 things were you referring to?

22 MR. KENNEDY: A. The types of things I
23 was referring to was not knowing how Mr. Benson might
24 have used the current age-class distribution, the kind
25 of success rates that have been achieved, the kind of

1 losses of the land base for necessary road construction
2 landings, the kind of renewal success rates and the
3 manner in which he aggregated the forest units and
4 working groups to perform the calculations at the
5 outset.

6 Those types of thing in terms of basic
7 model inputs along with other factors such as growth
8 rates, growth curves that he used and indeed I am not
9 really aware -- I'm not aware at all as to what
10 inventory base they used in order to start the
11 calculations.

12 Q. If one was dealing with a model such
13 as the one Mr. Benson was talking about, LTSY, and one
14 wanted to determine whether it was acceptable for use
15 in timber management, would knowing the criteria that
16 the model was designed to accept be important?

17 A. Yes, very much so. As I was
18 indicating in earlier cross-examination, knowing what
19 criteria goes into the model at the outset is very
20 important in order to be able to better interpret the
21 results that you are getting out of the model.

22 MR. FREIDIN: Those are my questions.
23 Thank you.

24 MADAM CHAIR: Thank you very much, Mr.
25 Freidin.

1 Well, we are almost finished all the
2 reply evidence. We thank you very much for coming to
3 Sudbury this week and giving us your evidence and we
4 will see some of you next week.

5 Who is going to be on Panel 4?

6 MR. FREIDIN: Mr. Gordon, Mr. Bisschop,
7 Mr. Kennedy, Dr. Balsillie. That's it.

8 MADAM CHAIR: Next Tuesday we will start
9 at 9:30 and we will be sitting on November the 11th.
10 Thank you very much.

11 MS. GILLESPIE: Madam Chair, is it
12 possible that we could sit at 10:30 in order to be able
13 to fly here on Tuesday morning?

14 MADAM CHAIR: Will we have enough time to
15 complete Panel 4 in two days if we start at 10:30 on
16 Tuesday?

17 MR. FREIDIN: Based on the estimates of
18 cross-examination, I think so. That was certainly my
19 belief when we dealt with this question the last time.

20 How long did you anticipate your
21 cross-examination to be?

22 MS. GILLESPIE: Without hearing the
23 direct evidence I can't be sure, but right now we are
24 thinking it will only be five or ten minutes.

25 MR. FREIDIN: I think we will be all

1 right then.

2 MADAM CHAIR: We have already told Mr.
3 Lindgren to be here for you -- we met him in the lobby.
4 There is a 7 a.m. flight Tuesday morning.

5 MS. GILLESPIE: That's fine, then. Thank
6 you.

7 MR. FREIDIN: 9:30?

8 MADAM CHAIR: We will start at 9:30.

9
10 ---Whereupon the hearing was adjourned at 2:30 p.m., to
11 be reconvened on Tuesday, August 11, 1992.

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